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Investigating Aspects of Self-Criticism and Emotional Intelligence in University Students

By

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Abstract

Self-criticism is a well researched personality construct that develops during childhood and later tends to predispose individuals to interpersonal problems, suicide, and other forms of psychopathology (Blatt, 1995, 2004). Emotional intelligence, on the other hand, may promote well being, relationship satisfaction, and success (Bar-On, 2000; Goleman, 1995; Mayer & Salovey, 1990; Zeidner, Roberts, & Matthews, 2002). A number of self-report measures of self-criticism, emotional intelligence, meta-emotional structures, retrospective accounts of childhood experiences, interpersonal distress, and mental health were completed by 297 university students. Data was analyzed using structural equation modeling. In brief, the results of the study found that recollections of parents as cold and harsh led to the development of self-criticism. Self-criticism led to difficulty accessing, utilizing, and regulating one's emotions. Furthermore, self-criticism increased interpersonal distress and other psychopathologies. On the other hand, recollections of parents as warm and supportive led to increased abilities to access, utilize, and regulate one's emotions. In particular, the ability to repair one's negative emotions led to improved mental health and positive affect. This research connects the self-criticism and emotional intelligence constructs together under an evolutionary perspective (Sloman, Gilbert, & Hasey, 2003). In brief, self-critics experience prolonged attachment ruptures, which stunts psycho-physiological emotional development. This can interfere with self-critics' abilities to appropriately process emotions and appraise the interpersonal environment. Feeling inferior, self-critics may be afraid of rejection and attempt to prove themselves, which leaves self-critics vulnerable to interpersonal distress and other psychopathologies. Further implications are discussed.

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Introduction

People are guided by many different strategies (e.g., emotional, motivational, cognitive, behavioral, interpersonal) in order to adapt and function in life (Gilbert, 2005). Certain strategies can involve taking a more interpersonally dominant position, whereas other strategies can involve taking somewhat more subordinate strategies depending upon the environment, in particular the social environment in which one finds oneself (Gilbert, 1992). When a child tries to adapt to a cold, over-controlling, harsh parental environment, they may involuntarily and out of necessity adopt a subordinate shame- / threat-based life strategy. Over time this strategy may become internalized and a personality structure referred to as self-criticism may develop (Blatt, 1974, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002). Although this self-critical life strategy / personality structure may help the child survive their harsh childhood experiences, the self-critical personality may not be well suited for adult life within a larger social environment. Self-criticism is often associated with interpersonal distress and other mental health issues (Blatt, 2004). These symptoms may reflect self-critic's sense of inferiority working at cross-purposes with self-critics' focus on gaining approval via their achievements (Sloman, Gilbert, & Hasey, 2003; Sturman & Mongrain, 2005, Wyatt & Gilbert, 1998). Furthermore, it appears that self-critics easily access a limited set of negative emotions and self-critical thoughts (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006), but they experience difficulties accessing, utilizing, and regulating the adaptive function of the full palette of human emotion (Damasio, 1998; Frijda, 1986; Greenberg, 2002). In other words, self-critics appear to lack emotional intelligence (Mayer & Salovey, 1990). Emotional intelligence appears to promote well-being, relationship satisfaction, and success (Bar-On, 2000;

Goleman, 1995; Mayer & Salovey, 1990; Zeidner, Roberts, & Matthews, 2002). Furthermore, emotional intelligence appears to develop as a result of exposure to a warm and supportive childhood environment (Buck, 1999; Cassidy, 1994; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz, & Hooven, 1996). Despite apparent associations between self-criticism and emotional intelligence, there is little research that empirically examines the relationship between these two constructs.

In a 1995 article entitled *The Destructiveness of Perfectionism*, Sidney Blatt noted the importance of studying self-criticism / perfectionism. He reviewed popular and scientific literature that drew associations between self-criticism / perfectionism and a number of mental disorders, most notably depression and suicide. Blatt (1995) found that people, some of them quite prominent and apparently successful, were more prone to depression and suicide when they engaged in setting standards for themselves that were unrealistically high. These individuals then criticized themselves when they did not reach those virtually unreachable standards. Blatt (1995) added that self-criticism / perfectionism is a symptom and/or cause of many DSM-IV (American Psychiatric Association, 1994) disorders such as depression, obsessive compulsive disorder, eating disorders, and substance abuse. It has been suggested that self-critics may be so preoccupied with their negative emotions, self-deprecating thoughts, and relentless pursuit of high standards that they may not have access to positive emotions and other adaptive responses (Bergner, 1995; Blatt, 2004; Heimpel, Wood, Marshall, & Brown, 2002; Mongrain & Zuroff, 1994; Sturman & Mongrain, 2005; Wyatt & Gilbert, 1998).

Prior to the 1990's emotions were generally considered to be "too elusive," the "antithesis" of reason, "disruptive events," a mysterious "folk theory," an outcome

measure for the study of cognitive processes, or an unobservable content of the "black box," our brain (Damasio, 1998; Greenberg, 2002; Panksepp, 2001; Russell, 2003). However, in the 1995 self-help book *Emotional Intelligence*, Daniel Goleman (1995) described with great effectiveness to a popular audience some of the groundbreaking work that had been happening in emotional research. He asserted that our behavior and ultimately our success in life are determined by the interplay between rationality and emotionality. Despite Goleman's (1995) non-scholarly approach, the scientific study of emotions, emotional intelligence, meta-emotion, and emotional socialization (Damasio, 1994; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz, & Hooven, 1997; Ledoux, 1996; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Russell, 2003) has been busily affirming Goleman's assertions.

Although Mayer and Salovey (1990) first coined the term "emotional intelligence," it has been given varied definitions, and according to these it is said to include a cognitive ability, a personality trait, and Goleman's mixed grab-bag of constructs (Bar-On, 1997; Goleman, 1995, 2001, 2006; Mayer, Caruso, & Salovey, 2000b; Pfeiffer, 2001; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). However, two components often appear in different definitions of emotional intelligence – an awareness of emotions and an ability to regulate emotions. As such, it appears that self-critics' tendency to focus on self-defeating emotions, thoughts, and behaviors tend to preclude their ability to recognize a wide spectrum of emotional experiences and appropriately regulate those emotions that do not meet their long term goals.

Self-critics tend to respond to emotionally arousing situations with a repertoire of shame- / threat-based emotions, cognitions, and behaviors (Blatt, 2004; Gilbert, 2005).

Furthermore, they tend to detect threat in non-threatening situations (Gilbert, 2005; Sturman & Mongrain, 2005) and they tend to stifle positive emotions (Bergner, 1995, Blatt, 2004). Emotionally intelligent individuals, on the other hand, are more able to regulate their emotional arousal and access self-reassuring resources in times of stress (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Furthermore, emotionally intelligent individuals may be able to appropriately express anger in order to assert dominance when needed (Gilbert, Durrant, McEwan, 2006), and yet access to positive emotions may help these individuals build psycho-social resources that may prevent interpersonal distress and other mental health issues (Fredrickson, 1998a). Self-critics are prone to interpersonal distress and other mental health issues (Blatt, 2004), whereas emotionally intelligent individuals tend to enjoy satisfying relationships and work (Goleman, 1995).

Overview of the Study

There are three primary goals to this study. The first goal is to further develop the evidence base of Blatt's (Blatt, 1974, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism, namely that cold harsh parenting practices lead to a stable trait of self-criticism, which in turn leads to interpersonal distress and other mental health issues. Greenberg (2002) suggests that much is missed in cognitive-behavioral psychologist's emphasis on attributions, cognitions, and behaviors when researching psychopathology. Greenberg (2002) asserts that emotions are a not to be ignored, fundamental component of the self, and thus a second goal of this study is to study some of the emotional processes involved in psychopathology. The third goal of

this study is to attempt to integrate self-criticism and emotional processes into Gilbert and colleagues' (1992, 2005; Sloman, Gilbert, & Hasey, 2003) evolutionary model of self-criticism and psychopathology. In brief, evidence from this study provided support for Blatt's (Blatt, 1974, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism. This study also supported the hypothesis that self-critics tend to lack emotional intelligence, which may indicate an involuntary subordinate / defeat strategy that self-critics learned in response to harsh childhood experiences (Gilbert, 1992, 2005; Gilbert & Irons, 2005; Sloman, Gilbert, & Hasey, 2003; Sturman & Mongrain, 2005; Wyatt & Gilbert, 1998). Consequently, helping such individuals become aware of and process the full range of their emotional resources is a crucial step in building positive compassionate relationships with the self and others (Gilbert & Irons, 2005; Greenberg, 2002)

This paper begins with a literature review of the self-criticism construct, beginning with Blatt's (1974) theory of self-criticism. Associated developmental aspects, self-critical behaviors, feelings, or thoughts, coping mechanisms, interpersonal problems, and psychopathology are also reviewed. Research (Flett, Hewitt, Blankstein, & Gray, 1998; Frost, Marten, Lahart, & Rosenblate, 1990) has demonstrated a large overlap between the self-criticism construct (Blatt, 1974), and the perfectionism construct (Hewitt & Flett, 1991). Research into the perfectionism construct adds to our understanding of self-criticism, and therefore a brief review of the perfectionism research is added. The second section of this literature review involves an examination of various aspects of emotional experience. This section begins with different definitions of emotion and how emotions impact the individual. This section continues with descriptions of various

constructs associated with emotional experience namely emotional intelligence, emotional regulation, emotional socialization, and meta-emotions. The third section of the literature review attempts to integrate the first two sections bringing together self-criticism and emotional experience under the banner of evolutionary theory (Gilbert, 1992, 2005). This section finishes with a rationale for the study and a number of hypotheses.

This paper then continues with the method section, which includes a brief discussion of, and rationale for, structural equation modeling, the statistical method employed to analyze the data. The next section includes a synopsis of the results, which is followed by a discussion of the results. Limitations of the study and future directions are also discussed. The final sections include references and an appendix. The appendix includes forms used, tables, and diagrams of the structural models.

Self-Criticism

Blatt's Theory of Self-Criticism

It has been suggested that human experience entails two fundamental modalities: a desire to be independent / autonomous and a desire to belong / affiliate (Minuchin, 1974). These modalities have been alternately referred to as agency and communion (Bakan, 1966; Leonard, 1997), autonomy and homonomy (Angyal, 1951), dominance / submissiveness and love / hostility (Wiggins, 1991), or independence and interdependence (Singelis, 1994). Gilbert and colleagues (Gilbert, 2007; Sloman, Gilbert, & Hasey, 2003) suggest these two modalities form two fundamental evolutionary strategies to compete and to attach that develop within a social context. Blatt and colleagues (Blatt, 1974, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) view personality development as evolving along two developmental lines through "complex dialectical processes" of anaclitic and introjective development. The anaclitic line, otherwise referred to as relatedness, involves the development of reciprocally satisfying interpersonal relationships. On the other hand, the introjective line, otherwise referred to as self-definition, involves the development of an independent and integrated personality structure. Normal development is dependent upon the reciprocal contribution of each process to the development of the other. In other words, "the development of concepts of the self is dependent upon establishing satisfying interpersonal experiences, and the continuation of satisfying interpersonal experiences is contingent upon the development of more mature concepts of the self" (Blatt & Shichman, 1983, p.188).

An individual who goes through normal development will thus grow up to be an adult with a well-integrated personality who enjoys satisfying interpersonal relationships.

However, when normal development is disrupted (e.g., loss, abuse, neglect) the child may develop an abnormal preoccupation with self-definition or relatedness and become highly self-critical or dependent. Blatt (1974) notes that a parent's attitudes about self, others, and the child will impact the child's thoughts and feelings about him/herself and his/her "strivings" in the world. Parents teach their children what they think is right and wrong. Eventually these teachings become internalized and form the foundation of the psychoanalytic construct of the superego. Self-criticism is associated with disruptions in the development of the superego (Blatt & Shichman, 1983). When a child is faced with their parent's disapproval, the child will make attempts to regain their approval. However, if the parent(s) continue to be ambivalent, demanding, critical, deprecatory, or hostile towards the child, the child may make concerted efforts, overachieving, in order to win back this coveted approval (Blatt, 1974). With these types of parents, this external approval will be short-lived, and in response the child develops a preoccupation with self-definition, ever wary for things he/she does wrong and ever critical of the imperfections that appear to bring on their parent's disapproval. Eventually these over-demanding critical parents become internalized or "introjected" within the child's psyche, which results in the child becoming their own slave-driver and critic (Blatt & Shichman, 1983). The self-critic's introjection of their critical parent(s) may reflect the self-critic's unconscious attempts to acquire their parent's power and strength (Blatt & Shichman, 1983) in order to be able to control an unstable environment and avoid further criticism and disapproval. As such, self-critics tend to describe their parents in idealized yet concrete and functional ways that convey emotional distance (Blatt & Maroudas, 1992).

Once the critical parent(s) becomes introjected and self-criticism becomes an established pattern, interpersonal problems and other psychopathologies may arise. Blatt and Shichman (1983) propose that an abnormal preoccupation with self-definition might lead to depression, obsessive compulsiveness, (phallic) narcissism, paranoia, or schizophrenia. It should be noted that this pathological configuration "is an exaggeration of a mode of functioning that is considered normal and healthy at an earlier time in development" (Blatt & Shichman, 1983, p.190).

Self-criticism as understood in Blatt's (1974) model finds parallels in personality constructs that have been referred to as compulsive self-reliance (Bowlby, 1977), dominant goal orientation (Arieti and Bemporad, 1980), unmitigated agency (Helgeson & Fritz, 1999), autonomy (Beck, 1983; Robins, Ladd, Welkowitz, Blaney, Diaz, & Kutcher, 1994), and perfectionism (Hewitt & Flett, 1991). However, Blatt (2004), who comes from a psychoanalytic perspective, makes a temporal distinction regarding the development of self-criticism. Bowlby (1980) emphasizes early development, whereas Arieti and Bemporad (1980) emphasize later child development (when the child attempts to separate from mother and establish independence). Beck (1983) emphasizes current cognitive distortions associated with each personality type and does not give a clear description of origins. Blatt (2004) however, emphasizes the Oedipal stage of child development, during which the child has the ability to self-reflect and sense causality. Blatt (2004) posits that the guilt associated with self-criticism requires self-reflection and internality, an appreciation of cause and effect relationships, and an awareness of various avenues of reparation. Blatt (2004) suggests that these qualities do not develop until the second year

of life, 16 to 18 months of age, and so places the convergence of self-criticism in that time.

In order to identify, research, and possibly help excessively self-critical adults, Blatt, D'Afflitti, and Quinlan (1976) developed the Depressive Experiences Questionnaire or DEQ. The DEQ measures two personality constructs, self-criticism and dependence, which predict two separate and distinct vulnerabilities to psychopathology, and a personality construct, efficacy, which predicts resilience to psychopathology. It should be noted that the self-criticism construct as understood by Blatt (1974) has its roots in psychodynamic theories (object-relations theory), which remain difficult to test. Therefore, researchers generally treat self-criticism, as measured by the DEQ, as a personality trait.

Characteristics of Self-Criticism

Self-critics typically criticize themselves and their behavior to the point of making irrational inferences or labeling the self as defective or unworthy (Bergner, 1995; Dweck & Legget, 1989; Kammins & Dweck, 1999). Furthermore, self-critics tend to view these characterological defects as global and immutable (Robins, 1995). These global immutable aspects demand a certain rigidity and constriction, which are then expressed as the self-critic's rigid adherence to external morals, demands, and regulations, and the self-critic's internal focus on things that are seemingly controllable such as thoughts, things, and actions (Blatt & Shichman, 1983). Spontaneity, feelings, and other people are unpredictable and pose a threat to stability and safety. However, not every rule can be upheld and not every thought can be controlled. Consequently, self-critics end up finding

grounds to endlessly reproach themselves ("ruminative self-scrutiny") while experiencing feelings of self-doubt, low self-esteem, self-loathing, self-blame, guilt, worthlessness, and inferiority (Bergner, 1995, Blatt, 2004). This self-reproach also makes self-critics vulnerable to others criticisms, low self-esteem, negative emotional states, depression, self-punishing behaviors, and sometimes suicide (Bergner, 1995; Blatt, 1995; Blatt & Shichman, 1983). By labeling themselves as defective, self-critics also invariably deem themselves ineligible or unworthy of experiencing love, meaningful work, or enjoyable pastimes (Bergner, 1995).

Blatt (1974, 2004) suggests that self-critics' relentless drive to compensate for their inadequacies impairs their ability to experience enjoyment. Self-critics' feelings of guilt and shame associated with beliefs that they have not lived up to expectations may overshadow positive emotions, such that they may experience a diminished ability to enjoy life or derive satisfaction from their accomplishments (Blatt, 2004). Gilbert and colleagues (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; see also Baldwin, 1992) suggests that when self-critics criticize themselves they may be activating the same neural pathways and interpersonal schemas as when others criticize and attack the self-critic. Just as one would act in a fearful, inhibited, discouraged and/or submissive way to others' criticisms and attacks on the self, so does the self-critic act in response to their own internal criticisms and attacks on self. As such, self-critics may learn to disengage from their own intrinsic hedonic cues in order to focus upon behaviors that will result in acceptance and approval according to the high standards that have been introjected (Shahar, Blatt, Henrich, Ryan, & Little, 2003). Bergner (1995) adds when confronted with situations where external criticism may occur, self-critics will likely also experience

anxiety. When the self-critics label themselves as morally deficient or socially unacceptable, guilt and shame are the likely outcomes. When faced with failure after setting themselves up for unattainable goals and standards, self-critics will likely experience helplessness or hopelessness. Despite these feelings self-critics struggle to control their feelings and contain their emotional expression in order to avoid disapproval (Blatt & Shichman, 1983). Self-critics organize themselves around control in order to gain approval, however the hopeless struggle to control impulses may lead to a low sense of self-efficacy and depression.

Another self-organizing principle for self-critics is their relentless pursuit of perfection. Self-critic's pursuit of ever higher standards does not reflect a striving for excellence, but instead a desire to avoid failure (Gilbert, 2007). The process of introjecting the attitudes and values of harsh parents may leave self-critics experiencing difficulty accepting personal and environmental limitations (Pacht 1984). Self-critics' excessive ideals and harsh super ego constantly drive them to perform and achieve (Blatt, 1995; Blatt & Maroudas, 1992). They set goals and standards that are virtually impossible to reach (Bergner, 1995). However, the fear of not being able to live up to these high expectations, and the guilt and shame associated with not living up to those expectations may lead to a form of "behavioral paralysis" – the self-critic's inability to reach their goals (Bergner, 1995; Blatt, 1974). Not reaching these lofty goals is considered failure, which is used as proof of self-critics' characterological deficits (Bergner, 1995). Magnifying failures, minimizing successes, and ignoring alternate evidence of ability and worthiness add to self-critics' proof of reprehensibility (Burns, 1999). Self-critics' readiness to magnify failure also includes their willingness to accept

the criticisms of others as further proof of defectiveness (Bergner, 1995). Even if there is proof of exemplary performance there is little self-congratulation and reward. Instead, there is a focus on why the performance was not perfect – producing the type of self-punishing acts that sometimes lead to psychopathology or suicide (Blatt, 1995; Hamachek, 1978).

Self-critics' self-punishing acts can stem from the use of emotion-oriented coping patterns, which entail excessive worry, rumination, and self-recrimination (Endler & Parker, 1990). Adaptive coping, in contrast, entails appropriate problem solving behaviors (i.e., problem definition, brainstorming, action, evaluation). Dunkley and Blankstein (2000) found that self-critical perfectionism (a composite of self-criticism and perfectionism) was mediated by maladaptive (emotion-oriented) coping patterns in predicting daily hassles and distress (i.e., depression, anger, psychosomatic complaints). Consequently, self-critics' maladaptive coping patterns present a roadblock to change (Bergner, 1995). Furthermore, self-criticism becomes a relatively automatic and unconscious process making change difficult. Even when made aware of their self-defeating patterns, self-critics are reluctant to give up their self-critical habits for fear of the alternatives such as mediocrity, weakness, or arrogance (Bergner, 1995). And finally, self-critics may feel powerless to change their circumstances and/or attitudes because they see evidence pointing to the immutability of their characterological defects (Dweck & Legget, 1989). Conflictual interpersonal relations also leave self-critics with limited external resources to manage their stress, which leave them vulnerable to real-life failures (Blatt, 2004). Therefore the self-critic's lack of awareness, lack of flexible coping skills, and lack of external resources present a predisposition to psychopathology (Blatt &

Shichman, 1983). If depression develops the self-critic's primary symptoms may include a thwarted drive towards achievement, interpersonal distance, and self-destructive tendencies (Blatt, 1995, 2004).

In addition to the predisposition to psychopathology, self-critics are also prone to interpersonal problems. Self-critics may view others as unhelpful, critical, or rejecting (Dunkley, Zuroff, Blankstein, 2003). Additionally, self-critics may attempt to conceal their feelings of inferiority, worthlessness, and self-doubt by overcompensating via activity, often work. This need for achievement may also be described as a need to avoid failure and to avoid the feared or real public scrutiny and repercussions (Blatt, 2004; Gilbert, 2007). As such, self-critics habitually strive for external symbols of validation such as material objects (e.g., big house, flashy car), recognition (e.g., awards, platitudes), and promotions (Beck, 1983; Blatt & Maroudas, 1992). This focus on external validation precludes a focus on internal and/or interpersonal sources of validation. Furthermore, self-critics strivings may be thwarted by their own behavioral paralysis (Bergner, 1995). Since self-worth is measured by performance and imperfect performance is viewed as complete failure (Flett, Hewitt, Blankstein, Gray, 1998), self-critics are ever vigilant to avoid others' judgments of poor performance or failure (Blatt & Maroudas, 1992; Dykman, 1998). Therefore, it is often easier to put off to tomorrow what one might be judged for today. Additionally, this constant external focus may leave self-critics vulnerable to others' manipulation via the use of external rewards and punishments (Csikszentmihalyi, 1997). As such, self-critics tend to avoid social situations in which they may appear flawed, or if such situations are unavoidable, self-critics will attempt to project a flawless image while avoiding disclosures of imperfection (Blatt &

Maroudas, 1992; Hewitt, Flett, & Ediger, 1995). This tendency to focus externally also inhibits self-critics from seeking help or support from others (Blatt, 1995), instead preferring to control the self and the environment (Blatt & Shichman, 1983). However, these attempts to project perfection do not go unnoticed by others who describe self-critics as ambivalent and possibly even avoidant (Blatt & Maroudas, 1992).

Other interpersonal problems may also arise for the self-critic. Self-critics are likely to experience high levels of frustration in response to their thwarted efforts to achieve high standards, recognition, and acceptance (Blatt, 2004). And this frustration / anger / betrayal may be expressed outwardly. Self-critics are likely to view "the glass as half empty" and thus focus upon the negative aspects of interpersonal relations. Consequently, self-critics may engage in moralistic, judgmental, or angry outbursts (Blatt, 2004). And yet their guilt and punitive self-repentance keeps self-critics connected to the very individuals by whom they feel judged and frustrated (Blatt, 2004). Some highly self-critical individuals may go to the extremes of demonstrating their power by defying authority and engaging in antisocial acts (Leadbeater, Blatt, & Quinlan, 1995). "Antisocial activity is an effort to gain relief from a sense of guilt by dramatically violating the limits set by moral standards and at the same time inviting punishment for the transgression" (Blatt, 2004, p.79, summarizing Aichhorn, 1925/1955). Blatt (2004) goes on to suggest that the parents of antisocial youth may also experience ambivalence towards moral standards, which may be expressed with inconsistent disciplinary styles that alternate between permissive and harsh critical approaches to parenting.

Self-Criticism and Perfectionism

As noted earlier, the self-criticism construct shares parallels with a number of other constructs, most notably perfectionism. Blatt and Zuroff (2002) conclude that self-criticism and perfectionism both develop as a result of exaggerated attempts to define the self. Frost, Marten, Lahart, and Rosenblate (1990) found that perfectionists' concerns about making mistakes and their doubts about taking action were highly correlated with self-criticism. Flett, Hewitt, Blankstein, and Gray (1998) found associations between self-criticism, self-oriented perfectionism, and socially-prescribed perfectionism. Self-criticism was also related to perfectionistic tendencies such as setting high standards, self-blame, fear of negative evaluation, wanting the approval of others, and depression.

Two measures of perfectionism, both labeled the Multidimensional Perfectionism Scale, have dominated perfectionism research over the past decade (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt and Flett, 1991). Frost and colleague's (1990) perfectionism scale includes six dimensions: self-doubt over one's actions (uncertainty regarding when a task is done), setting excessively high personal standards, high parental standards (love and approval contingencies), excessive parental criticisms, an overemphasis on precision and order, and excessive concern over making mistakes (fear of failure driven goals). Hewitt and Flett's (1991) scale includes three subscales measuring self-oriented, other-oriented, and socially prescribed perfectionism. Hewitt and Flett (1991) characterize self-oriented perfectionists as setting unrealistically high personal standards and expectations. Self-oriented perfectionists strive to avoid personal failures, and rarely partake in self-congratulatory behaviors when their endeavors are successful. Other-oriented perfectionists are characterized as setting unrealistically high

standards for significant others and then stringently monitoring their performance (Hewitt & Flett, 1991). Socially-prescribed perfectionism entails the belief that significant others place exacting standards upon the self. Socially-prescribed perfectionists attempt to gain the attention and approval of significant others, all the while attempting to avoid their disapproval (Hewitt & Flett, 1991). Dunkley and Blankstein (2000) argue that the socially-prescribed construct most closely resembles the self-criticism construct.

Socially-prescribed perfectionists, like the self-critics they so closely resemble, have deep-seated feelings of vulnerability and inferiority (Adler, 1964; Blatt, 1995). They tend to believe they will fail to live up to others' standards, they tend to believe others will not help them, and they tend to expect to be criticized and/or rejected by others (Blatt, 1995; Dunkley, Zuroff, Blankstein, 2003). Thus failure presents a double edged sword to perfectionists / self-critics: a.) the disappointment of failure, b.) the interpersonal consequences of failure (Dunkley, Zuroff, Blankstein, 2003; Gilbert, 2007).

In attempting to avoid the aversive consequences of failure, perfectionists / self-critics tend to avoid interpersonal relationships or their relationships tend to be superficial, distant and unemotional (Blatt, Quinlan, Pilkonis, & Shea, 1995, Hewitt & Flett, 1991). Hewitt and colleagues (2001 as cited by Habke & Flynn, 2002) found that perfectionists attempt to project a façade of perfection while attempting to avoid behavioral displays that might indicate imperfection. These facades are difficult to maintain and impede the development of intimate, satisfying relationships. At the same time perfectionists are caught in a bind, wanting relationships while needing to maintain a protective distance (Habke & Flynn, 2002). The irony is that this distant and defensive

interpersonal style may produce the very criticism, betrayal, or lack of recognition by others that the perfectionist so fears (Flett, Hewitt, Garshowitz, & Martin, 1997).

Perfectionism, in particular socially prescribed perfectionism, has been associated with self-criticism, self/other blame, fear of negative evaluation, need for others approval, low self-perceived social rank, excessive daily hassles, anger, guilt, shame, defeat, emotion-oriented coping, maladaptive ego defenses avoidant and passive aggressive personality patterns, suicidal ideation, and a number of symptoms of psychopathology such as alcohol abuse, somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, paranoia, and hostility (Dunkley & Blankstein, 2000; Dunn, Whelton, & Sharpe, 2006; Flett, Besser, Hewitt, 2005; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Hewitt, Flett, & Weber, 1994; Wyatt & Gilbert, 1998). Blatt (1995) notes how perfectionism is a component of many of the DSM categories of psychopathology, which inhibits the successful outcome of psychological treatment (see also Low, Hewitt, Mikail, Flynn, Flett, & Parkin, 1999).

Psychopathology may be further exacerbated by perfectionists' generation of additional stress in their own lives (Hewitt & Flett, 2002). This stress generation may be attributed to perfectionists' tendency "to stringently evaluate themselves and others, focus on negative aspects of performance, and experience little satisfaction" (p.259) even when high standards have been achieved. A number of researchers have found evidence for perfectionists' dissatisfaction with their own outstanding performance (Flynn, Hewitt, Flett, & Weinberg, 2001; Frost & Henderson, 1991; Mor, Day, Flett, & Hewitt, 1995). Hewitt and Flett (2002) add that perfectionists also have a tendency to anticipate future stress, which in turn generates feelings of anxiety, inadequacy, depression, and

hopelessness. Furthermore, when the anticipated stressful event or failure happens, perfectionists tend to be overly reactive and distressed compared to non-perfectionists (Hewitt & Flett, 2002). Perfectionists then use maladaptive coping patterns in their attempts to deal with these stressors (Hewitt & Flett, 2002). Even when they use adaptive coping behaviors they evoked increased heart rate (indicating internal arousal / conflict) in comparison to non-perfectionists using adaptive coping patterns (Flynn, Hewitt, Flett, & Weinberg, 2001).

Developmental Aspects of Self-Criticism

It has been suggested that the developmental pathways of both perfectionism and self-criticism are similar (Blatt, 1974; Blatt & Zuroff, 2002; Hamachek, 1978). As noted earlier, parental attitudes and behaviors affect their children's attitudes and behaviors (Blatt, 1974). It is generally accepted that parental attitudes and behaviors fall along two basic dimensions, a warm / cold dimension and a permissive / controlling dimension (Baumrind, 1978; Parker, Tupling, & Brown, 1979). The warm / cold dimension describes the degree to which parents are emotionally available to their children. The warm pole describes parents who tend to be empathetic, affectionate, interested, and close to their children. The cold pole describes parents who tend to be indifferent, distant, even rejecting of their children. The permissive / controlling dimension describes the level of authority exercised by parents. The permissive pole describes parents who tend to be democratic in family matters, and who encourage independence and autonomy in their children. The control pole describes parents who tend to be demanding, critical, intrusive, over-protective and over-controlling. Baumrind (1967) found that children subjected to

anomalous parenting behaviors (high control and coldness) were more fearful, anxious, moody, sad, passive aggressive, aimless, sulky, unfriendly, easily annoyed, irritable, and self-conflicted.

As noted earlier, disruptions in normal development may lead to an abnormal pre-occupation with self definition (Blatt & Shichman, 1983). These disruptions may include parental abuse, criticism, or neglect of the child. Parents' high standards and self-critical attitudes may also be modeled and subsequently learned by the child. Consequently, these children may display behaviors aimed at restoring their parents' acceptance or approval, and behaviors aimed at avoiding their parents' future criticisms. If parents' attitudes and behaviors do not change, these self-critical attitudes may become introjected within the child's psyche forming a lifelong pattern of self-critical attitudes and behaviors.

Blatt and Maroudas (1992) suggest that "controlling, intrusive, overly critical, and punitive parental figures cause the developing child to struggle, in a distorted manner, to establish an exaggerated sense of independence and self-definition" (p.172). Self-critics' retrospective accounts of their parents while growing up include perceptions of neglect, increased parental absences, rejection, criticism, impatience, conflict, tension, opposition, rivalry, hostility (in particular with father), maternal emphasis on achievement, maternal antisocial behavior, paternal demands for obedience and conformity, and a lack of warmth, positive involvement, reciprocity, nurturance, affection, success, and paternal ambition (Mongrain, 1998; Pagura, Cox, Sareen, & Enns, 2006; Quinlan, Blatt, Chevron, & Wein, 1992; Sadeh, Rubin, & Berman, 1993; Whiffen & Sasseville, 1991). Additionally, Whisman and Kwon (1995) found that a lack of recounted parental warmth was mediated by self-critical dysfunctional attitudes in predicting depressive symptoms,

while Mendelson, Robins, and Johnson (2002) found that an autonomous personality orientation (similar to self-criticism) was associated with a lack of recounted parental care and warmth, and experiencing physical and emotional abuse.

These studies indicate that parents do impact their children as suggested by Blatt (1974). Furthermore, a mother and a father play different roles in society and in the family and thus they should impact a child differentially. For example, Brewin, Andrews, and Furnham (1996) found that self-criticism was associated with retrospective perceptions of parental criticisms parents, however only mother's self-reported criticisms were associated with perceived criticisms. Enns, Cox, and Larsen (2000) found that retrospective perceptions of father's over-controlling behaviors was mediated by neuroticism, socially-prescribed perfectionism, and concern over making mistakes, and partially mediated by self-criticism in predicting depressive symptoms among males. Conversely, retrospective perceptions of mother's coldness and lack of caring was mediated by self-criticism, socially-prescribed perfectionism, and concern over mistakes in predicting depressive symptoms among females. Cheng and Furnham (2004) found that recall of mother's and father's caring parental style was associated with self-criticism for both male and female participants. Father's discouragement of behavioral freedom and mother's denial of psychological autonomy was associated with self-criticism in male participants. Both parents' thwarting of behavioral and psychological expression was associated with self-criticism for female participants.

Using Osgood, Suci, and Tannenbaum's (1957) semantic differential scales, Sadeh, Rubin, and Berman (1993) found that retrospective perceptions of parental benevolence were negatively correlated with mother's activity, but positively correlated

with father's activity. Perceptions of parental punitiveness was negatively correlated with mother's evaluation, potency, and activity, but positively correlated with father's potency. And finally, perceptions of parental ambitiousness were positively correlated with father's evaluation, but uncorrelated with mother's evaluation. These findings suggest that parental qualities are differentially valued and that mother and father may play different roles in the psychological development of the child. As has been noted, development occurs through a dialectical process of relatedness and self-definition (Blatt & Zuroff, 2002). This process may be more complicated in that the mother may provide the relational model and the father may provide the self-defined model from which the child develops an autonomous-relational self-concept (Blatt & Zuroff, 2002; Kagitcibasi, 1996; Sadeh, Rubin, & Berman, 1993).

Blatt (2004) has suggested that harsh parenting may lead to the development of self-criticism, which in turn may lead to interpersonal distress and other mental health issues. Self criticism has been found to mediate the relationship between parental coldness and distance (the opposite of warmth and care) in predicting loneliness (Wiseman, Mayseless, & Sharabany, 2006), and personality dysfunctions and non-melancholic depression (Whiffen, Parker, Wilhelm, Mitchell, & Malhi, 2003). Conversely, Cheng and Furnham (2004) found that recounted maternal care was inversely and partially mediated by self-criticism in predicting happiness. Speranza and colleagues (Speranza, Atger, Corcos, Loas, Guilbaud, Stephan, Perez-Diaz, Halfon, Venisse, Bizouard, Lang, Flament, & Jeammet, 2003) found that bulimic and anorexic self-critics reported more adverse childhood events than matched controls. Sachs-Ericsson, Verona, Joiner, and Preacher (2006) found that recollections of parental verbal

abuse endured during childhood led to self-critical schemas, which in turn led to the risk of developing depression and anxiety. Interestingly however, self-criticism only partially mediated the relationship between sexual and physical abuse and the risk of developing depression and anxiety.

While all of these studies were based on childhood memories of adult participants, Zuroff and colleagues (Koestner, Zuroff, & Powers, 1991; Thompson & Zuroff, 1999a, 1999b, 1998; Zuroff, Koestner, & Powers, 1994) conducted a series of longitudinal studies using alternate measures of self-criticism, which provided validation of the retrospective findings. Koestner, Zuroff, and Powers (1991) found that maternal restrictiveness and rejection of their daughters at age 5 led to the development of self-criticism in these girls at age 12. Paternal restrictiveness and rejection of their sons at age 5 led to the development of self-criticism in these boys at age 12. Furthermore self-criticism at age 12 was associated with self-criticism at age 31 for women and with inhibited aggressive impulses at age 31 for men. Koestner, Zuroff, and Powers (1991) conclude that "internalization of a restrictive, rejecting same-sex parent results in the development of a harsh superego that sets unrealistically high standards and inflicts excessive guilt and suffering for failing to meet those standards" (p.195). Koestner, Zuroff, and Powers (1991) also posit that expressions of sadness and depression are more socially acceptable for girls than boys – hence the likelihood of a self-critical personality structure continuing into adulthood for women. On the other hand, expressions of anger are more socially acceptable for boys. However a restrictive / rejecting upbringing may preclude boys' aggressive behaviors – hence the likelihood that adult men would report inhibited aggressive impulses as the outstanding feature of their self-criticism.

Zuroff, Koestner, and Powers (1994) also found that self-criticism at age 12 was associated with self-critics' dissatisfaction with their role as parents at age 31. Thompson and Zuroff (1999a, 1998) found that self-critical mothers were controlling and critical of their adolescent daughters (mean age 14) but not their adolescent sons (mean age 14). Thompson and Zuroff (1999a) concluded that self-critical mothers might see their daughters as projections of themselves, whereas boys are socialized to be more autonomous than girls. Thompson and Zuroff (1999b) also found maternal dissatisfaction was partially mediated by maternal coldness in predicting daughter's insecure attachment, and daughter's insecure attachment fully mediated the relationship between maternal coldness and daughter's self-criticism.

Self-criticism may also negatively impact childhood peer relations. For example, Rosenfarb, Becker, Khan and Mintz (1994) found that self-criticism was associated with recollections of a lack of communication and issues of trust with father and peers. Blatt, Hart, Quinlan, Leadbeater, and Auerbach (1993) found that self-criticism predicted recounted popularity concerns, aggressive tendencies, and depressive symptoms in adolescent girls. Alternately, self-criticism predicted suicidal ideation, somatic complaints, popularity concerns, aggressive tendencies, and delinquency in adolescent boys. Mongrain (1998) concludes that self-critics generalize negative interpersonal patterns with their parents to other interpersonal interactions, which eventually leads to interpersonal problems in adulthood. Self-critics tend to be aloof in their interpersonal interactions in order to avoid the rejection and criticism they expect from others. However, self-critics' low positive affect and high negative affect may elicit rejection from others – the same rejection self-critics are attempting to avoid (Mongrain, 1998).

And thus a cycle that perpetuates alienation develops (Coyne, 1976; Marcus & Nardone, 1992; Segrin & Abramson, 1994; Wachtel, 1993).

Developmental Aspects of Perfectionism

As alluded to earlier, research on the development of perfectionism can add to the understanding of the development of self-criticism. Hamachek (1978) posits that "neurotic perfectionism" may develop within environments of either dismissive non-approval or conditional positive approval. Flett, Hewitt, Oliver, and Macdonald (2002) add that parents may also model perfectionistic attitudes or inadvertently instill perfectionistic attitudes in trying to protect their children from making mistakes. Perfectionism (in particular socially-prescribed perfectionism) has been found to be associated with recounted exposure to authoritarian parenting styles, parental harshness (e.g., strict, demanding, critical), a lack of mutual reciprocity between parent and child (i.e., unidirectional parenting that fails to acknowledge the child), low ratings of family satisfaction, and a lack of warmth and support from both parents, (Flett, Hewitt, Oliver, and Macdonald 2002; Flett, Hewitt, & Singer, 1995; Frost, Lahart, & Rosenblate, 1991; Kawamura, Frost, & Harmatz, 2002, Rice, Ashby, & Preusser, 1996). Flett, Hewitt, and Singer (1995) also found socially-prescribed perfectionism was associated with recollections of father's overly permissive parenting style. Conversely, Ablard and Parker (1997) found that for maladaptive perfectionists, approval and reward was contingent upon achieving their parent's performance goals in childhood. This was in contrast to adaptive perfectionists (striving for high ideals without the associated pathological self-

recrimination) whose parents were primarily focused on learning goals that emphasized enjoyment and expansion.

Perfectionists often have parents who are perfectionists, suggesting that perfectionism can be transmitted from one generation to the next. Flett, Hewitt, Oliver, and Macdonald (2002) cite evidence that the modeling of perfectionistic standards by parents predicted the development of perfectionism in their children of the same sex. Maternal perfectionism has been found to be associated with beliefs reflecting parental restrictiveness (i.e., authoritarian parenting), level of intrusiveness (i.e., interference and over-control of child's autonomy), and emotional sensitivity / responsiveness (Flett, Hewitt, Oliver, & Macdonald, 2002). Using structural equation modeling Enns, Cox, and Clara (2002) found that retrospective perceptions of parental coldness, over-protection, perfectionism, high standards, and criticalness were associated with university students' maladaptive perfectionism and proclivity towards depression.

As such, perfectionism has been associated with postpartum negative affectivity and depression, anxiety, over-concern with making parenting mistakes, low parental self-esteem, unclear parenting roles, parenting stress and dissatisfaction, inappropriate emotional responsiveness, and emotion-oriented coping, (Flett, Hewitt, Oliver, & Macdonald, 2002; Mitchelson & Burns, 1998). Flett and colleagues (Flett, Hewitt, Oliver, & Macdonald, 2002, p. 122) conclude that "the controlling behaviors of perfectionistic parents may be motivated by a desire to avoid fear outcomes" such as imperfect children.

Alternately, Kochanska and Aksan (1995) have shown that children are more likely to adopt their parent's standards and ideals when there is a positive, responsive, and reciprocal relationship between mother and child. This leaves Flett, Hewitt, Oliver,

and Macdonald (2002) to speculate that authoritarian parent's high, punitively enforced, standards may lead to the child's development of reactivity to those standards, an internalized rejection of those standards, and a focus on externalized standards in order to avoid parental rejection and/or punishment.

Self-Criticism and Interpersonal Problems

As mentioned earlier in this paper, the development of self-critical attitudes and behaviors may leave one vulnerable to interpersonal distress and other mental health issues (Bergner, 1995; Blatt, 1974; Blatt, 1995; Blatt & Shichman, 1983). Self-criticism has been found to be associated with lower levels of agreeableness (Dunkley, Blankstein, & Flett, 1998; Zuroff, 1994), higher levels of introversion and hostility (Mongrain, 1993), lower levels of perceived social support (Dunkley, Zuroff, & Blankstein, 2006; Mongrain, 1998), lower levels of pleasant social interactions (Zuroff & Fitzpatrick, 1995), fewer strivings for intimacy or affiliation in college men (Mongrain & Zuroff, 1994), fewer requests for social support (Mongrain, 1998), lower levels of partner relationship satisfaction and trust (Zuroff & Fitzpatrick, 1995), lower relationship satisfaction (Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000), loneliness (Besser, Flett, & Davis, 2003; Wiseman, Mayseless, & Sharabany, 2006), and social phobia (Cox, Fleet, & Stein, 2004). Undergraduate peers have also rated self-critics as less expressive, poorly functioning, and these peers claimed to know self-critics less well than their fellow non-self-critical peers (Powers, & Zuroff, 1988; Mongrain, 1998). Using structural equation modeling, Mongrain, Lubbers, and Struthers (2004) found that peers rated self-critical roommates as cold and submissive on

an interpersonal circumplex, which resulted in the peers' negative affect towards, and subsequent rejection of, the self-critic.

In a more controlled and intimate setting, Santor and Yazbeck (2006) found that self-critics persisted in soliciting more negative feedback after receiving negative feedback, but not after positive feedback. Self-critics also tended to become more disagreeable and blaming, and less collaborative after receiving negative feedback, but not after positive feedback (Santor, Pringle, & Israeli, 2000). Similarly, Mongrain (Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000) found that self-critical women became more anxious and hostile in a couples' conflict resolution task with their partners after controlling for dysphoria. Self-critics also perceived their partners as being more hostile. The partners in turn perceived their girlfriends as being more hostile and less loving. Objective raters rated both the self-critical women and their partners as more hostile and less loving during the conflict resolution task, however, they rated the self-critical women as less submissive and loving than the women perceived themselves to be. Furthermore, these self-critical women were also observed to emit more negative feedback about their partners and about themselves. Similarly in studying romantic couples, Zuroff and Duncan (1999) found that only girlfriends' self-criticism predicted overt hostility (observer rated angry words, sarcasm, put-downs, criticisms, scowling and other negative non-verbal communications) via the mediational pathways of negative relational schemas and negative cognitive affective reactions. Moreover, girlfriend's overt hostility resulted in boyfriend's negative cognitive affective reactions and overt hostile reactions. Interestingly, Vettese and Mongrain (2000) found that those women with a profile of both high self-criticism and high dependency did not display

these results. They conjecture that within these "dual vulnerability" women, dependency may attenuate self-criticism and provide a protection against distress and hostility that "pure" self-criticism (high self-criticism and low dependency) does not.

Besser, Flett, and Davis (2003) found that self-critics tend to not share their inner most thoughts and feelings (silencing the self), which results in a sense of loneliness. Zuroff, Moskowitz, and Cote (1999) found that self-critics were less likely to engage in agentic or communal behaviors that generate pleasant affect in non-self-critics, and if they did partake in either of these behaviors, the self-critics experienced less pleasant affeot and more negative affect than others. They conjecture that for self-critics, engaging in warm communal behaviors fosters intimacy, which increases the risk of being rejected / hurt by others. Alternately, engaging in agentic behaviors in the presence of coworkers was a risk to be avoided by self-critics for fear of exposure to failure.

Self-Criticism and Mental Health Problems

In addition to interpersonal problems, a vast body of research suggests that self critics also tend to experience other mental health problems. Self-criticism has been found to be associated with symptoms of depression (Besser, Flett, & Davis, 2003; Besser & Priel, 2003a, 2003b; Cox, Fleet, & Stein, 2004; Cox, McWilliams, Enns, & Clara, 2004; Enns, Cox, & Inayatulla, 2003; Fehon, Grilo, & Martino, 2000; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Mongrain, Lubbers, & Struthers, 2004; Mongrain, Vettese, Shuster, & Kendal, 1998; Mongrain & Zuroff, 1994; Sachs-Ericsson, Verona, Joiner, & Preacher, 2006; Shahar, Henrich, Blatt, Ryan, & Little, 2003; Shahar, Joiner, Zuroff, & Blatt, 2004; Sturman & Mongrain, 2005; Vettese & Mongrain, 2000;

Whelton & Greenberg, 2005; Whiffen, Parker, Wilhelm, Mitchell, & Malhi, 2003; Zuroff & Duncan, 1999), partner corroborations of self-critic's depressive symptoms (Besser & Priel, 2003a), negative affect (Dunkley, Zuroff, & Blankstein, 2006; Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000; Zuroff, Moskowitz, & Cote, 1999), peer corroborations of self-critics' negative affect (Mongrain, 1998), anxiety (Sachs-Ericsson, Verona, Joiner, & Preacher, 2006; Zuroff & Duncan, 1999), avoidant coping strategies (Besser & Priel, 2003b; Dunkley, Zuroff, & Blankstein, 2006), amotivation (Shahar, Kalnitzki, Shulman, & Blatt, 2006), self-contempt (Whelton & Greenberg, 2005), hostility (Zuroff & Duncan, 1999), anger, (Dunkley, Blankstein, & Flett, 1995), fighting (Leadbeater, Blatt, & Quinlan, 1995), high risk sexual activities (Leadbeater, Blatt, & Quinlan, 1995), eating disorders (Speranza, Atger, Corcos, Loas, Guilbaud, Stephan, Perez-Diaz, Halfon, Venisse, Bizouard, Lang, Flament, & Jeammet, 2003; Speranza, Corcos, Loas, Stephan, Guilbaud, Perez-Diaz, Venisse, Bizouard, Halfon, Flament, & Jeammet, 2005), substance abuse (Leadbeater, Blatt, & Quinlan, 1995; Speranza, Corcos, Stephan, Loas, Perez-Diaz, Lang, Venisse, Bizouard, Flament, Halfon, & Jeammet, 2004), post-traumatic stress disorder (Cox, MacPherson, Enns, & McWilliams, 2004), hopelessness (Donaldson, Spirito, & Farnett, 2000; Enns, Cox, & Inayatulla, 2003; Fehon, Grilo, & Martino, 2000), suicidality (Cox, Enns, & Clara, 2004; Donaldson, Spirito, & Farnett, 2000; Fazaa & Page, 2003; Fehon, Grilo, & Martino, 2000), ambivalence over emotional expression (Mongrain & Zuroff, 1994), and negative life events / stress (Dunkley, Zuroff, & Blankstein, 2006; Shahar, Henrich, Blatt, Ryan, & Little, 2003; Shahar, Joiner, Zuroff, & Blatt, 2004). Self-criticism has also been found to be inversely correlated with positive affect (Dunkley, Zuroff, & Blankstein, 2006;

Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000; Zuroff, Moskowitz, & Cote, 1999), positive life events (Shahar, Henrich, Blatt, Ryan, & Little, 2003), intrinsic motivation (Shahar, Henrich, Blatt, Ryan, & Little, 2003; Shahar, Kalnitzki, Shulman, & Blatt, 2006), self-resilience (Whelton & Greenberg, 2005), and self-esteem (Fehon, Grilo, & Martino, 2000; Whelton & Greenberg, 2005).

Using structural equation modeling, Zuroff and Duncan (1999) found that self-criticism was partially mediated by negative relational schemas (actively destroying the relationship, passively allowing the relationship to deteriorate, partner attacks, lack of partner compromise) in predicting negative cognitive affective reactions (hostility, anxiety, depression, and perceptions of partner as hostile, mistrusting, and/or detached). Furthermore, Shahar, Joiner, Zuroff, and Blatt (2004) found that self-critics tend to generate additional life stress, which in turn leads to depression.

Although self-critics may experience more interpersonal distress and other mental health issues, they are also less likely to seek or benefit from therapy. For example, in a series of studies of a 16-week individual therapy program Blatt and colleagues (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998) found that high levels of perfectionism / self-criticism was negatively associated with the degree of clients' self-rated change in depressive symptoms and interpersonal functioning, therapists' ratings of the degree of clinical change, and clinical evaluators' ratings of the degree of clinical change. Self-critics' perceptions of the therapeutic alliance remained low over the period of therapy, whereas the therapeutic alliance increased significantly for non-perfectionists (Zuroff, Blatt, Sotsky, Krupnick, Martin, Sanislow, & Siemens, 2000). Furthermore, clinical improvement became negligible after the eighth session for those high in perfectionism /

self-criticism (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). The lack of clinical improvement was found to be partially mediated by self-critics' inability to develop a therapeutic alliance (Zuroff, Blatt, Sotsky, Krupnick, Martin, Sanislow, & Siemens, 2000). The lack of clinical improvement was also partially mediated by self-critics' lack of social support (Shahar, Blatt, Zuroff, Krupnick, & Sotsky, 2004). Overall, high levels of perfectionism / self-criticism negatively predicted therapeutic alliance and social support at the end of therapy over and above that of the effects of baseline symptoms (depressive symptoms and interpersonal functioning) and personality disorders (Shahar, Blatt, Zuroff, & Pilkonis, 2003). At 18-month follow-up high levels of perfectionism / self-criticism was associated with therapists' perceptions of a lack of positive clinical change, and with self-critics' lack of satisfaction with the treatment process (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). Low and colleagues (Low, Hewitt, Mikail, Flynn, Flett, & Parkin, 1999) found that perfectionists made more negative and marginally personal (little depth) self-disclosures in a 12-session group therapy program.

Summary of Self-Criticism Section

High levels of self-criticism can develop during childhood when children are exposed to prolonged parental indifference, disapproval, criticisms, rejections, threats, and abuse. Repeated failed efforts to regain parental approval can result in children setting ever higher standards in an attempt find some way of avoiding their parent's criticisms. As adults, these individuals may feel defective, inferior, ashamed, and unworthy. Self-critics may attempt to keep rigid control over their lives by focusing on achieving unrealistically high standards in order to avoid other's criticisms and rejection.

In order to maintain control they may engage is constant self-scrutiny and in order to detect any imperfections. However, life is imperfect and when imperfections are detected by the self or others, self-critics may respond with harsh self reproach and self punishing behaviors. These dysfunctional beliefs, emotions and behaviors leave the self-critic vulnerable to a number of psychopathologies such as depression or suicide. Self-critics' lack of positive emotions, focus upon negative aspects, moralistic beliefs, and aloof stance make these individuals difficult to have a relationship with. Thus self-critics may experience the very criticisms and rejections they are attempting so hard to avoid. To date, more needs to be known about the emotional processes that foster these self-critical attitudes and behaviors.

Emotional Experience

The Adaptive Function of Emotion

As has been proposed to this point, self-criticism involves not only cognitive and behavioral constriction and rigidity, but an emotional constriction as well. The emotional life of self-critics is apparently fraught with negative emotions and devoid of positive emotions (Bergner, 1995; Blatt, 1974). This may also reflect childhood experiences within a family that was fraught with negativity and devoid of warmth. It has been suggested that emotions give meaning and direction to life, and that emotional experience can be a determinant of success or failure in life (Damasio, 1994; Goleman, 1995; LeDoux, 1996).

Damasio (1998; see also Gilbert, 2005) asserts that emotions are an evolutionary neurological development that represent the "highest-order direct expressions of bioregulation" (p.84), which promote survival within complex environments (i.e. society and culture), and affect the quality of that survival. Buck (1999, p.303) suggests that emotion is an effect of motivation: "Motivation is defined as the potential for behavior that is built into a system of behavior control, and emotion is defined as the readout of motivational potential when activated by a challenging stimulus." Panksepp (2001) suggests that emotions provide "various forms of valenced arousal" (p.160) in response to various stimuli that then "sensitize the organism to behave in categorical ways." (p.161). Similarly, Frijda (1986) suggests that emotions are a biologically based meaning system that provide information about an organism's well being and provide impulses to act, or "action tendencies." These action tendencies ready the organism to act in a particular way so as to maintain or alter its relationship to the environment in an adaptive way.

Whatever the potential adaptive function of much studied negative emotions, Fredrickson (1998a) argues that positive emotions also serve a crucial adaptive function. She notes that negative emotions have a tendency to narrow an individual's action tendency in order to deal with threats and promote survival. For example, anger and fear invoke a large number of physiological responses, which in turn prepare the individual for fight, flight, or freeze when confronted by potentially life threatening situations. These threat-based emotions can override positive emotions and dominate information processing when the organism is exposed to threatening stimuli (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Frijda, 1986: Panksepp, 2001). However, Fredrickson (1998a, p.304) contends that "positive emotions prompt individuals to discard time-tested or automatic (everyday) behavioral scripts and to pursue novel, creative, and often unscripted paths of thought and action." Isen (2002) adds that "positive affect leads to more flexible, adaptive thinking and to enhanced innovative ability, creativity, and problem solving in a wide range of circumstances." In her broaden-and- build theory of positive emotions, Fredrickson (1998) suggests that positive emotions broaden one's action tendencies in the moment, build long-term personal resources (i.e., physical, intellectual, social), help regulate negative emotions, and ameliorate the effects of disease. As such, Greenberg (2002) suggests all emotions are an evolutionary advantage that would not exist if they were not generally useful, albeit some emotions may be maladaptive in certain circumstances.

Damasio (1998) and Panksepp (2001) assert that human beings' complex social abilities (e.g., language, culture) and cognitive abilities (e.g., memory, reasoning, creativity, planning) are based upon more primitive (in an evolutionary sense) limbic

structures of the brain. Panksepp (2001, p.137) adds that "affective feelings arise from specifiable neuro-emotional systems of the mammalian brain, shared across species." Panksepp (2001) has identified seven of these sub-cortical / limbic neuro-emotional structures in the brain: The "seeking" structure invokes curiosity and expectations of reward. The "rage" structure counters threats to one's freedom. The "fear" structure protects from physical harm. The "panic" structure monitors the level of social support and provides the motivation to regain social support when levels are perceived to be too low. The "play" structure optimizes psycho-socio-emotional skills and counteracts negative emotions. The "lust" structure promotes procreation. And finally the "care" structure promotes nurturance and social connection. These seven emotional structures are intrinsic to all mammals, however human complexity also involves self-conscious emotions such as shame, guilt, or pride (Gilbert, 2007; Tangney, 2002)

It should be noted that the words emotion, feeling, mood, affect are often used interchangeably. Damasio (2001, p.781) attempts to provide clarification in suggesting that an emotion is a physiological response – a "patterned collection of chemical and neural responses that is produced by the brain when it detects the presence of an emotionally competent stimulus." A feeling on the other hand is a cognitive phenomenon –"the mental representation of the physiological changes that characterize emotions" (Damasio, 2001, p.781). Finally, a mood is a sustained state of emotion and feeling that is not necessarily associated with an identifiable stimulus, and likely associated with cognitive processes (Buck, 1999; Damasio, 2001). Although Damasio (2001) provides these clarifications, other researchers do not necessarily abide by these delineations. As such, emotions appear to contain both cognitive and physiological aspects.

To this end Gohm and Clore (2002) put forth their "affect-as-information" hypothesis. They suggest people make decisions based upon two components of affect: the cognitive aspect, which attaches valence to the feeling; and a physiological aspect, which provides bodily sensations as feedback. Gohm and Clore (2002) argue that because the emotions are experienced physically, they add credibility to the feeling and the accompanying cognitions. Ledoux (1996, p.69) adds that "emotion and cognition are best thought of as separate but interacting mental functions mediated by separate but interacting brain systems." Interestingly, Ledoux (1996) points out that there are more neural connections leading from the amygdala (one of the emotional centers of the brain) to the cortex (the cognitive area of the brain) than the other way around. This suggests that although certain thoughts can elicit certain emotions, powerful emotions will tend to flood the cortex and the consequent thoughts must follow along. Gilbert (2007) asserts that the primacy of the amygdala's threat based system points to the fact that it is better to miss a positive incident than it is to miss a negative incident. A negative incident may have detrimental consequences, whereas a positive incident may reoccur at a later date (Gilbert, 2007). Therefore, emotions may operate outside of cognitive awareness providing intuitive knowledge that speeds information processing (Gilbert, 2005; see also Haidt, 2001) and conserves cognitive capacity.

From a cognitive perspective, Carver and Scheier (1990) propose that emotions arise to give the individual feedback on the rate of progress toward a goal. For example, success attributed to one's own actions and attributes generates pride, whereas failure attributed to one's own actions and attributes generates shame (Weiner, 1982). Conversely, personal success attributed to others generates feelings of gratitude, whereas

personal failure attributed to others generates hostility. Lazarus (1991) adds that emotions also arise in response to one's assessment of one's ability to cope and adapt to an environment that thwarts or threatens one's goal pursuits. Thus sufficient coping resources are synonymous with emotional regulation. From a cognitive perspective then, cognitive appraisals (i.e., loss, threat, challenge), or the meaning we attach to a situation, will then determine what type of emotional response will be experienced (Frijda, 1986; Lazarus, 1991; McRae, 1984). This negative emotional response is then followed by one of three coping responses: task-oriented, emotion-oriented, and avoidance-oriented coping; the later two being more maladaptive (Endler & Parker, 1990).

In addition to the physiological arousal and the cognitively subjective aspects of emotion, Buck (1999) suggests that emotions also serve a third function, that of social communication and coordination. To this end, Ekman and colleagues (Ekman, Friesen, O'Sullivan, Chan, Diacoyanni-Tarlatzis, Heider, Krause, LeCompte, Pitcairn, Ricci-Bitti, Scherer, Tomita, & Tzavaras, 1987; Ekman & Heider, 1988) have identified seven primary expressions of human emotion: anger, happiness, sadness fear, disgust, surprise, and contempt. Gilbert (1992) has suggested that emotions help to project one's alpha status or "social attention holding potential." Similarly, Smith-Lovin (1991) suggests emotions provide an indication of how successfully an individual's situation (identity, behavior, emotion, environment) is maintaining its social meanings.

Averill (1980, p312) defines emotion as "a transitory social role that includes an individual's appraisal of the situation and that is interpreted as a passion rather than an action". Social roles are complex social rules of emotional definition, appropriate emotional display and appropriate social interactions. Averill (1997) suggests through the

complexity of the social process, a complexity of emotions also arise. Individual emotional patterns thus reflect the influence and functions of the social community and involve the acting out of transitory roles that are sanctioned by society. Thus it is not surprising that with different cultures there are different culturally appropriate display rules of emotion (Ekman, Friesen, O'Sullivan, Chan, Diacoyanni-Tarlatzis, Heider, Krause, LeCompte, Pitcairn, Ricci-Bitti, Scherer, Tomita, & Tzavaras, 1987). Although the expression of emotion is relatively universal, the content of emotion is not necessarily so. The content of what produces an emotion and the associated intensity of expression varies from culture to culture.

Clark (2002, p.35) observes that "much and perhaps most of the emotion that we experience in everyday life arises in the context of our social relationships." Damasio (1994) reported on a number of individuals who suffered damage to the limbic regions of their brains who experienced difficulties identifying emotions, making socially oriented decisions, and maintaining interpersonal relationships despite unimpaired intellectual abilities. Forgas (2002, p.13) has found that even "transient affect has a significant influence on peoples' interpretation of social situations and their subsequent interpersonal behaviors." People in a positive state of emotion are more likely to be confident, assertive, optimistic, cooperative, communicative, and make positively biased (not necessarily accurate) judgments of self and others. People in a negative state of mind on the other hand, were more likely to be more pessimistic, avoidant, defensive, unsure, and make negatively biased judgments of self and others. Forgas (2002) added that positive affect enables individuals to tolerate interpersonal dissonance, whereas negative affect

increases the negative experience of dissonance and leads to attempts to change the situation.

From these descriptions of emotion, an emotion can be assessed for its cognitive evaluation of valence (pleasant versus unpleasant), social potency (dominant versus submissive), and physiological activation (aroused versus inactive) (Mehrabian & Russell, 1974; Osgood, Suci, & Tannenbaum; 1957). As such emotion appears to serve three adaptive functions: Emotions may prepare an individual for action (Frijda, 1986). Emotions may provide feedback on actions taken (Carver & Scheier, 1990). And emotions may communicate intentions to others in cost effective ways that do not require full behavioral engagement (Greenberg, 2002).

Emotional Development

Researchers (Panksepp, 2001; Perry; 2002; Schore, 2001) suggest that a child's developing brain structures are malleable, and develop in a "use it or lose it" or "use-dependent fashion" in response to the stimulation of childhood experiences. The most important experiences are those between caregiver and child in the first 1 ½ to three years of life (Panksepp, 2001; Schore, 2001). Nurturing early life experiences are important for the development of normal socio-emotional functioning such that a wide variety of neural structures are stimulated, develop, and strengthen in response to experience (Panksepp, 2001; Perry; 2002; Schore, 2001). Thus a child raised in a supportive environment will likely develop a sense of security, which promotes exploration of the environment and the acquisition of additional resources, as well as the ability to self-regulate / self-soothe in the wake of threatening or thwarting environments (Fredrickson, 1998a; Gilbert,

2005). Conversely, when children experience prolonged adverse conditions such as loss, threat, neglect, or injury, certain neural structures can be remain under stimulated and underdeveloped in response to these experiences, which can lead to compromised socio-emotional functioning through out life (Panksepp, 2001; Perry; 2002; Schore, 2001). Thus these children may grow up with well developed threat systems, but under-developed self-regulating / self-soothing systems (Gilbert, 2005). In essence it would be less useful to have a well developed self-regulation system if one is raised in a threatening environment (Gilbert, 2007).

During the first 1 ½ years of life an infant's "primary sense of self," communication, and survival is dependent upon their developing limbic systems, the emotion processing structures of the brain (Panksepp, 2001). In other words, during the first 1 ½ years of life an infant is primarily emotional. Later as the cortical regions of the brain develop these limbic responses become more socially constructed emotional expressions mediated by cognition (Panksepp, 2001). Schore (2001, p.213) has found that physiological / neuro-structural changes can occur within the infant's brain in response to stressful situations that may leave "a permanent physiological reactivity in the limbic areas of the brain." Panksepp (2001) suggests that if children's emotional expressions are repeatedly repressed, obstructed, or punished, unresolved tensions within the nervous system may develop. Panksepp (2001) refers to these tensions as "persistent feeling tendencies in subjective experiences."

These unresolved neural tensions will predispose an individual to narrow their emotional-cognitive-behavioral-social responses to threat-based repertoires (Fredrickson, 1998a; Gilbert & Irons, 2005) that limit the full evaluation and exploration of the

environment making it difficult to distinguish what is "toxic" from what is "nourishing" (Mate, 2003). Thus, neglected and/or traumatized children may grow up with a limited capacity to experience positive emotional states, lack empathy, employ passive coping strategies (emotion or avoidance coping), experience heightened negative reactivity, experience difficulties "terminating" negative emotions, suffer from depression or anxiety, and experience difficulties adjusting to novel, and hence emotionally stressful, experiences (Schore, 2001). Panksepp (2001) postulates that thwarting the "seeking" impulse may lead to paranoid, addictive, or obsessive-compulsive psychopathologies. Restriction of the "seeking" system may invoke the "rage" impulse and may lead to aggressive psychopathologies. Panksepp (2001) postulates that restriction of the "care and panic" systems may lead to depression, aloofness, and attachment problems later in life.

Emotional Intelligence

As outlined, emotions appear to serve a number of purposes. Emotional intelligence would then imply an ability to utilize emotion in the formation and achievement of one's goals. Goleman (as quoted by O'Neil, 1996, p.6) provides the following description:

> "Emotional intelligence is a different way of being smart. It includes knowing what your feelings are and using your feelings to make good decisions in life. It's being able to manage distressing moods well and control impulses. Its being motivated and remaining hopeful and optimistic when you have setbacks in working toward goals. Its empathy: knowing what the people around you are feeling. And it's

social skill – getting along well with other people, managing emotions in relationships, being able to persuade or lead others."

Despite Goleman's popularity, it was Mayer and Salovey (1990) who first coined the term emotional intelligence. They suggested that emotional intelligence is a subset of social intelligence or of Gardner's (1983) personal intelligences (i.e., interpersonal intelligence and intrapersonal intelligence). Mayer and Salovey (1990) defined emotional intelligence as "the ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (p.189). Mayer (2001) posits that personality consists of four primary parts: the energy lattice, which includes emotions and motive; the knowledge works, which involves information storage of feelings and thoughts about the self and the world; the role player, which involves how we project and act socially; and the conscious executive, which manages and regulates the other parts of personality. Although feelings may arise without higher order cognitive processing (Zajonc, 1980), Mayer (2001) suggests that emotional intelligence develops as a result of an individual monitoring their emotions and retaining this experience in memory. Continued emotional experiences redirect life endeavors such that certain roles develop. Finally, self-reflective experimentation with emotional reactions and their consequences leads to the development of more effective emotional responses.

The Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) was one of the first attempts to measure emotional intelligence. A number of other self-report measures of emotional intelligence (Bagby, Parker, & Taylor, 1994; Bar-On, 1997; Schutte et al, 1998) were also developed. Mayer, Salovey, and Caruso

(2001) also developed the Mayer Salovey Caruso Emotional Intelligence Test or MSCEIT in attempt to more accurately measure emotional intelligence as an ability as originally defined (Mayer & Salovey, 1990). However, Salovey, Mayer, Goldman, Turvey, and Palfai (1995, p.147) state that "the TMMS is a reasonable operationalization of aspects of emotional intelligence" that may help discern those individuals of high emotional intelligence. As such, the TMMS was selected for this study to measure the self-perceived abilities to access, utilize, and regulate one's emotions. It should be made clear that we are measuring self-reported aspects of emotional intelligence, not necessarily the construct of emotional intelligence in its entirety. Mayer (2001) adds that scales of emotional intelligence may be affected by mood state, and therefore it is important to control for current mood in making predictions of emotional intelligence.

It has been argued that intelligence accounts for about 20% of the variance in predicting academic achievement and occupational status (Gardner, 1983; Mayer & Salovey, 1997; Sternberg, 1997), whereas emotional intelligence may have an even larger effect than intelligence in predicting success (Goleman, 1995). Being emotionally intelligent implies that one would have an ability "for handling affectively loaded encounters, which might predict future adaptive outcomes" (Zeidner, Roberts, & Matthews, 2002, p.217). To this end aspects of emotional intelligence has been found to be correlated with academic success (Chapman & Hayslip, 2005; Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan, 2004; Parker, Summerfeldt, Hogan, & Majeski, 2004; Petrides, Frederickson, & Furnham, 2004; Schutte et al, 1998), and manager effectiveness (Mayer, Caruso, & Salovey, 2000a). More specifically, Barchard (2003) and Lam and Kirby (2002) found that aspects of emotional intelligence continued

to predict verbal ability, cognitive processing speed and accuracy, and grade point average over and above the effects of general intelligence and personality.

Emotional intelligence is also correlated with other psychosocial factors. Aspects of emotional intelligence have been found to be associated with well being (Gohm & Clore, 2002), happiness (Petrides & Furnham, 2003b), optimism (Saklofske, Austin, Minski, 2003; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Schutte et al, 1998), positive affect (Gignac, 2006), life satisfaction (Austin, Saklofske, & Egan, 2005; Extremera, & Fernandez-Berrocal, 2005; Gignac, 2006; Mayer, Caruso, & Salovey, 2000a; Palmer, Donaldson, & Stough, 2002; Saklofske, Austin, Minski, 2003; Schutte et al, 1998; Spence, Oades, & Caputi, 2004; Summerfeldt, Kloosterman, Antony, & Parker, 2006), health related quality of life (Extremera, & Fernandez-Berrocal, 2002), self-esteem (Gohm & Clore, 2002; Mayer, Caruso, & Salovey, 2000a), increased quantity and quality of social relationships (Austin, Saklofske, & Egan, 2005; Lopes, Brackett, Nezlek, Schultz, Sellin, & Salovey, 2004; Lopes, Salovey, Cote, Beers, & Petty, 2005; Lopes Salovey, & Strauss, 2003; Salovey, Stroud, Woolery, & Epel, 2002), marital happiness and forgiveness (Fitness, 2001; Gohm & Clore, 2002), pro-social behavior (Charbonneau, & Nicol, 2002; Mayer, Caruso, & Salovey, 2000a), and exercise habits (Ioannis, & Ioannis, 2005).

Conversely, aspects of emotional intelligence have been found to be inversely correlated with loneliness (Chapman & Hayslip, 2005; Saklofske, Austin, & Minski, 2003; Summerfeldt, Kloosterman, Antony, & Parker, 2006), social anxiety (Summerfeldt, Kloosterman, Antony, & Parker, 2006), depressive symptoms, (Austin, Saklofske, & Egan, 2005; Ciarrochi, Dean, & Anderson, 2002; Rude, & McCarthy, 2003; Salovey,

Mayer, Goldman, Turvey, & Palfai, 1995; Salovey, Stroud, Woolery, & Epel, 2002; Saklofske, Austin, Minski, 2003; Schutte et al, 1998; Taylor, 2001; Trinidad & Johnson, 2002), negative affect (Gignac, 2006), self-reported distress and rumination (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995, Salovey, Stroud, Woolery, & Epel, 2002), physiological stress responses (Salovey, Stroud, Woolery, & Epel, 2002), stress related illnesses and use of medical facilities (Goldman, Kraemer, & Salovey, 1996), suicidality (Ciarrochi, Dean, & Anderson, 2002), alcohol and substance abuse (Austin, Saklofske, & Egan, 2005; Ioannis, & Ioannis, 2005; Speranza, Corcos, Stephan, Loas, Perez-Diaz, Lang, Venisse, Bizouard, Flament, Halfon, & Jeammet, 2004; Taylor, 2001; Trinidad & Johnson, 2002), anti-social behaviors (Moriarty, Stough, Tidmarsh, Eger, & Dennison, 2001), eating disorders (Speranza, Corcos, Loas, Stephan, Guilbaud, Perez-Diaz, Venisse, Bizouard, Halfon, Flament, & Jeammet, 2005; Taylor, 2001), and post-traumatic stress disorder, borderline personality disorder, and somatoform disorders (Taylor, 2001).

As with intelligence per se, a rich emotional environment aids in the development of emotional intelligence. Factors attributed to the development of aspects of emotional intelligence (e.g., emotional literacy, emotional competence, emotional regulation, empathy, and/or social competence) include secure infant attachment, authoritative parenting practices, parental emotional expressivity, parental sensitivity to children's distress, and open family discourse about emotions (Zeidner, Roberts, & Matthews, 2002). For example, Kafetsios (2004) and Youngmee (2005) found that securely attached young adults had higher levels of emotional intelligence, whereas insecurely attached (anxious-ambivalent) individuals were lower in emotional intelligence. Emotional intelligence has been associated with parental warmth (Mayer, Caruso, & Salovey,

2000b). Bennett, Bendersky, and Lewis (2005) found that emotional knowledge in four year old children was associated with the child's cognitive abilities, mother's verbal abilities, and a low risk environment. Buck (1999, p.307) concludes that

> "Successful emotional education leads to emotional competence, the ability to follow cultural display rules to label, understand, and appropriately express feelings and desires. Contrariwise, deficits in emotional education lead to a kind of emotional helplessness that may contribute significantly to psychopathology"

Emotional Regulation

Emotion regulation and/or repair are considered to be the most important aspects of emotional intelligence (Gottman, Fainsilber-Katz, & Hooven, 1996; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Emotional regulation entails different attempts to manage strong, often negative, emotions (versus denying or stopping them) in order to reach a certain goal (Russell, 2003) that may be in contradiction to the affective experience of a situation. Some situations may lead to such strong emotions and attendant action tendencies that one's goals and even one's survival may be jeopardized if these emotions were truly acted upon. As such, emotional regulation may include a number of processes: psychological attempts to reappraise and/or redefine the situation or the self; behavioral attempts to alter self presentation or the environment; interpersonal attempts to display empathy or assertiveness; and internal attempts to suppress or self-soothe physiological arousal (Gottman, Fainsilber-Katz, & Hooven, 1996; Lazarus, 1991; Russell, 2003; Sternberg, 1997; Younger, 1991).

Although adults generally regulate their own emotions, young children often

require additional regulation provided by caregivers (Buck, 1999; Cassidy, 1994; Eisenberg, Cumberland, & Spinrad, 1998; Schore, 2001; Sroufe, 1997; Thompson, 1994). Schore (2001) posits that the mother's attunement to and regulation of the infant's emotions is the most important contribution to the development of the child's interpersonal and autonomous regulation of emotions. In a healthy dyadic relationship the mother plays with her child reinforcing positive affect and gently regulates negative affect when there are "attachment ruptures" (Schore, 2001). Stifter and colleagues (Braungart & Stifter, 1991; Stifter & Moyer, 1991) found that mothers who displayed moderate levels of activity during a game of peek-a-boo received the most frequent and intense smiles from their infants. Eisenberg, Cumberland, and Spinrad (1998) conclude that caregivers who accept their infant's emotional displays and respond appropriately, initially provide an external means of emotional regulation allowing the infant to feel free in exploring a variety of emotional expressions.

On the other hand, in an unhealthy dyadic relationship the mother may be mis-attuned with her child, she plays less with her child, she provides less protection from harmful situations or people, and she inappropriately reacts (e.g., escalating, rejecting) to the child's affect (Schore, 2001). Stifter and colleagues (Braungart & Stifter, 1991; Stifter & Moyer, 1991) found that mothers who displayed either over-responsiveness or disinterest during a game of peek-a-boo, had infants who used strategies such as averting eye-contact or thumb sucking as a means of self-oriented emotional regulation. Schore (2001) suggests that prolonged caregiver-child mis-attunement leaves the infant with few pleasurable experiences and prolonged negative affect. Early emotionally dysregulating experiences may predispose children to "experience low levels of relational stress as

traumatic" (Schore, 2001, p.206). Consequently, these infants have fewer options to regulate emotional expressions and they learn to dysregulate or over-regulate their emotional expressions in response to caregivers who are insensitive, hypersensitive, or rejecting of their infant's emotional expressions (Cassidy, 1994; Eisenberg, Cumberland, & Spinrad, 1998).

However, Perry (2002, p.95) goes on to suggest that children's "healthy attachment capacity is not enough to create healthy socio-emotional function." Perry (2002) suggests that social experiences outside of the parental attachment bond (e.g., siblings, extended family, friends, teachers) provide the stimulation required for full complex socio-emotional development. He notes that the ratio of adult caregivers to children under the age of six in more primitive societies is three adults to one child, whereas our modern daycare standards set the ratio at one adult to five children. As such, Perry (2002) and Panksepp (2001) suggest that despite our culture's "materialistic richness" modern children are being raised in an impoverished socio-emotional environment for which their neural capacity is not prepared. A lack of socio-emotional stimulation may lead to a loss of quality of life.

Expressiveness and Emotional Socialization

The process of learning about emotions and the parental provision of emotional regulation are referred to as emotional socialization (Denham & Kochannoff, 2002; Eisenberg, Cumberland, & Spinrad, 1998). Emotional socialization entails "parental reactions to children's emotions, parental discussion of emotion, and parental expression of emotion" (Eisenberg, Cumberland, & Spinrad, 1998, p.243; see also Denham &

Kochannoff, 2002). The result of this emotional socialization is socially acceptable emotional expressions in children, however the definition of "socially acceptable" is wholly dependent upon the child's cultural milieu, in particular their parents' meta-emotional structures (Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz & Hooven, 1997). For example, some parents believe that emotional expression, in particular the expression of negative emotions, is a bad thing. Consequently they may set out to teach their children to minimize, ignore, deny, or prevent the expression and/or experience of these emotions. On the other hand, parents who believe that it is healthy to be in touch with one's emotions may set out to teach their children to value and express all of their emotions in developmentally appropriate ways.

Gottman, Fainsilber-Katz and Hooven (1997) have identified two styles of parenting and emotional socialization: emotion coaching, and emotion dismissing. Emotion dismissing parents tend to be impatient with negative emotional expressions viewing them as if they were a "toxic" waste of time, view an unhappy child as a reflection of their failure as parents, attempt to protect and/or prevent their children from feeling negative emotions by distracting the child (e.g., "cheer up," tickle, use food), don't notice lower-intensity emotions in their children, and do not have an extensive emotional vocabulary. They are also overly involved in their child's mistakes, provide the child with a lot of information at once in a very excited manner when giving directives, wait for the child to make mistakes, then resort to character criticisms, insults, threats and punitive behaviors.

Wenzlaff and Eisenberg (1998) suggest that if parents respond to their child's negative affect with threats of negative consequences or dismissing the child's feelings,

the child may learn to suppress their feelings. "Thus, when children encounter prohibitions on the expression of emotion – particularly in the absence of the provision of comfort or assistance in coping with the emotion – the suppression of negative thoughts may appear to be an expedient way of complying with their parents' restrictions" (Wenzlaff & Eisenberg, 1998, p.310). However, this process of suppressing negative emotions and thoughts also precludes opportunities to learn and adapt, which may eventually create new problems that the child and their parents had hoped to avoid in the first place. Once emotional / cognitive demands exceed coping resources, a break down of mental control ensues, followed by a flood of negative emotions and cognitions that were previously held back. Over time this process of emotional suppression and breakdown establishes a vulnerability to stress and a deficiency in personal and other modes of awareness and understanding.

Emotion coaching parents on the other hand communicate empathy and understanding, view negative emotions as natural, view negative emotional expressions as an opportunity for intimacy and teaching, help the child to identify and verbally label their emotions, and respond to lower intensity emotions in their children. They also establish clear boundaries on behavior, provide short simple directives in a calm manner, help the child problem solve solutions that are within the child's reasoning and abilities, and praise the child's performance when the child does something right.

Emotion coaching parents tend to rear children who develop a high degree of affective social competence. Affective social competence involves "an understanding of one's own and others' emotions, the tendency to display emotion in a situationally and culturally appropriate manner, and the ability to inhibit or modulate experienced and

expressed emotion and emotionally derived behavior as needed to achieve goals in a socially acceptable manner" (Eisenberg, Cumberland, & Spinrad, 1998, p.242; see also Halberstadt, Denham, & Dunsmore, 2001). Emotion coaching parents have children who use more adaptive self-regulated emotion regulation strategies, have higher vagal tones, are better able to identify and label emotional expressions and experience higher quality peer interactions (Gottman, Fainsilber-Katz, & Hooven, 1996; Laible & Thompson, 1997 cited in Eisenberg, Cumberland, & Spinrad, 1998). Eisenberg, Cumberland, and Spinrad (1998) suggest that supportive parental reactions to their child's expression of emotion may regulate arousal, sharpen emotional sensitivity and empathy, teach a variety of appropriate emotional expression strategies, and provide a secure base for the development of an autonomous-relational self. To this end, Eisenberg and colleagues (Eisenberg, Valiente, Sheffield-Morris, Fabes, Cumberland, Reiser, Thompson-Gershoff, Shepard, & Losoya, 2003) found that children's emotional regulation mediated the relationship between mother's emotional expressivity and the child's interpersonal and mental health. Using structural equation modeling, Eisenberg (Eisenberg et al, 2003) found that positive maternal emotional expressivity led to children's ability to regulate their emotions, which led to increased social competence and fewer internalizing and externalizing behaviors in school aged children. Children's social competence and fewer externalizing behaviors persisted at a two-year follow-up assessment.

Emotion dismissing parents on the other hand tend to rear children who learn that emotions are negative or threatening things (Eisenberg, Cumberland, & Spinrad, 1998). Consequently, these children may avoid gaining an understanding of different emotions, avoid learning appropriate emotional expressions, and instead learn maladaptive coping

strategies to deal with their own emotions and others' emotional expressions. In particular, Eisenberg, Fabes, and Murphy (1996) propose that non-responsive or rejecting parental responses to their child's negative emotional expressions may heighten their child's emotional arousal. When thought suppression efforts become overwhelmed, unintentional "ironic enhancement" of the unwanted thoughts and feelings come to the foreground (Wenzlaff & Eisenberg, 1998). Furthermore, Eisenberg, Cumberland, and Spinrad (1998) posit that a child's over-arousal will likely lead to a self-centered focus, difficulty hearing and focusing on important issues, either over or under control of emotion expressions and associated behaviors, and disruptions in social interactions. Evidence suggests that cold and critical parenting leads to increased sympathetic activation of the child's cardiovascular system, denials of distress despite physiologically measured distress, poorer health, maladaptive coping strategies, lower school achievement, poorer peer relations and negative affectivity (Eisenberg, Fabes, & Murphy, 1996; Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991; Gottman, Fainsilber-Katz & Hooven, 1997).

Fredrickson (1998b) adds a third perspective to emotional socialization, that of positive emotions. She points out that the emotional socialization research deals primarily with negative emotions, the regulation of negative emotions, and their appropriate expression. However she argues that emotional socialization also includes the cultivation of positive emotions. Initially parents may provoke positive emotions in their infant children by cuddling, caring, and playing with them (Fredrickson, 1998b). As the child develops parents begin to communicate their ideals and they selectively create situations that provide opportunities for children to self-generate positive emotions and build

physical, intellectual, and social resources (Fredrickson, 1998b). A pleasant side-effect of instilling these attributes is that the child now has additional resources to help regulate their negative emotions (Fredrickson, 1998b).

Although parents play a primary role in teaching children about emotions, the socialization of emotions occurs within a cultural milieu, such as the family and school (Eisenberg, Cumberland, & Spinrad, 1998; Halberstadt, 1986; Halberstadt & Eaton, 2003). Halberstadt and Eaton (2003) found that children's understanding of emotions was negatively related to negative family expressiveness, whereas children's positive emotional expressiveness was associated with positive family expressiveness. These negative expressions within the family have a lasting impact on the child's emotional development. For example, Ramsden and Hubbard (2002) found that negative expressions within the family and mother's passive acceptance of their child's anger was associated with poor emotional regulation and aggressive behaviors in school among a sample of fourth grade students. Retrospective perceptions of negative family expressiveness have been found to be associated with depression (Cooley, 1992) and angry expressions (Burrowes & Halberstadt, 1987; Clark & Phares, 2004) in young adults.

Meta-Emotion

Parents' emotional expressions and socializations provides their children with what has been referred to as emotional models, emotion networks, emotion schemes or meta-emotion structures (Dunsmore, & Halberstadt, 1997; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz, & Hooven, 1997; Greenberg, 2002; Leahy,

2002; Oatley, 1992). Meta-emotion may be defined as "emotion about emotion" (Gottman, Fainsilber-Katz, & Hooven, 1997) and involves one's ability to recognize and categorize the experience of a discrete emotion (Russell, 2003). Meta-emotion structures entail organized and structured sets of emotions and cognitions about emotion, which are dependent upon a larger system (i.e., social) of meaning construction (Gottman, Fainsilber-Katz, & Hooven, 1997; Russell, 2003). In other words, meta-emotion structures serve to evaluate emotional episodes and regulate emotional expression according to society's rules (Russell, 2003). More simply put, meta-emotion structures develop as parents direct their children's attention to those things and situations that are considered significant in life. These meta-emotional structures also include the emotional valence, arousal, and potency typically attached to significant things and situations. And finally, these meta-emotion structures include information about the expressions and behaviors that are deemed appropriate in response to significant things and situations.

If a young child runs playfully and unaware out into a busy street, a parent might first react in horror and fear, run out into the street, scoop the child up, and return to safety. Once back on safe territory, the parent's fear may change to anger as they chastise the child. In this scenario the child begins to develop a meta-emotion structure, whereby busy streets become significant, are attached to pain, and should be approached with caution. A little later in this scenario the child only needs to be reminded of the original meta-emotion structure with a quick loud bark from the parent. Eventually the child becomes an adult that has incorporated two meta-emotion structures; one of looking both ways to cross the street in order to avoid pain, and another that provides meaning and information about caring for children of their own. Once set in childhood these meta-

emotion structures tend to accompany and influence the individual for life ((Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Weinfeld, Sroufe, & Egeland. 2000).

Despite the generally adaptive function of emotions, Greenberg (2002) notes that to some degree emotions may not be well suited to modern environments. Emotions may become maladaptive through their misapplication or through dysfunctional learning. Greenberg (2002) provides an example of how maladaptive meta-emotion structures may develop and later express themselves. When a child's efforts to obtain the safety, care, and approval of their parents is met with coldness, rejection, and/or abuse, the child may develop a meta-emotion structure in which feelings of intimacy are equated with feelings of pain. Other inappropriate coping mechanisms (e.g., self-criticism) may be learned in order to make sense of and cope with the situation. Later in life, when the individual gets close to others, these meta-emotion structures become triggered, negative emotions are evoked, and fight or flight action tendencies become activated. Furthermore, these meta-emotion structures may occur at an unconscious level, leaving the individual unaware of the sources of their emotions and attendant action tendencies. Consequently, the individual may be unable to regulate their emotions appropriately and end up acting in ways that prove damaging to the self and their interpersonal relationships.

Summary of the Emotional Experience Section

Emotions are evolved neurological reactions that provide information to the self about the environment in order to promote survival and well-being. Emotional neurological structures develop in a "use it or lose it" fashion. When infants are exposed

to warm nurturant parenting on a prolonged basis, infants are more free to express a wide variety of emotions, thus stimulating neurological development of positive and negative emotions. When infants are exposed to neglectful, threatening, or abusive parenting on a prolonged basis, infant's primary emotions may be fear and shame, which stimulates the development of fear- / shame-based neurological structures, but has a tendency to trim the positive emotional neurological structures. If parents continue to dismiss, demean, or suppress their children's emotions, these children may learn to dismiss their emotions and be unable to regulate heightened emotional responses. Being unable to appropriately utilize emotional information, these children may experience difficulties interacting within the social domain, which requires appropriate emotional expression. However, if parents help regulate their children's emotions and coach children about emotions, these children may embrace their emotions and develop a certain aptitude for emotional processing. Being able to access and utilize their emotions in addition to being adept at appropriate emotional expression and regulation, these children will likely enjoy satisfactory interpersonal relationships, success, and well-being. The field of emotional intelligence is still in its infancy and more needs to be known about the developmental course of emotional intelligence and its psychosocial sequelae.

Relating Emotion and Self-Criticism

Self-Criticism and Emotional Experience

An individual is born with genetic potentials that interact with the environment such that environments shape different phenotypes. Which genetic potentials will be expressed depends upon the effects of environmental influences and the intrinsic nature of the self. Fear-inducing environments may foster abnormal preoccupations with self-definition or relatedness (Blatt & Shichman, 1983), and shame- / threat-based neuropsychological systems (Gilbert, 2005). Safe and co-operative environments, on the other hand, foster independence, self-actualization, trust, co-operation, and altruism. These positive qualities however, are less adaptive in threatening environments (Gilbert, 2007)

These negative, fear-inducing childhood environments may jeopardize the adaptive, bio-regulating functions of emotion (Damasio, 1998). This process may involve the over-stimulation of the fight-or-flight system, which can lead to relatively permanent neuro-structural changes that leave the individual with "a physiological reactivity" or "unresolved tensions" (Panksepp, 2001; Schore, 2001). Although the immediate perception of threat and the short-term activation of negative emotions and the stress response may be adaptive, chronic perceptions of threat and the activation of negative emotions and the stress response may overwhelm / exhaust the individual and lead to physiological malfunction, interpersonal distress and other mental health issues (Buck, 1999; Selye, 1978; Tugade & Fredrickson, 2004). The brain also develops in a "use it or lose it" fashion (Panksepp, 2001; Perry, 2002; Schore, 2001) such that environmental under-stimulation of the exploratory and affiliative emotional systems can lead to a

dearth of positive emotions and personal resources associated with those positive emotions (Fredrickson, 1998a).

The basic proposition of this research project is that self-critics have experienced less than favorable developmental environments, which in the long run have suppressed or restricted current potentials. Consequently, self-critics experience an inadequate fragile sense of self, they focus on their achievements in hopes of gaining others approval or at least avoiding their rejection, they set ever higher standards for their performance, they have difficulties accessing and utilizing a full range of emotional possibilities, they have difficulties regulating negative emotions, they have a propensity towards negative mood states and psychopathology, and they experience difficult and distressing interactions with others. The following section attempts to integrate the self-criticism and emotional processes literature under an evolutionary umbrella, and provide a rationale and hypotheses for this study.

This integration section begins with a description of the self and the intrinsic desire to explore and create. Self-identity may be described as involving inherent emotional processes and thus the necessity to be emotionally attuned, which is discussed in the next section. Everyone criticizes themselves at times, and therefore self-criticism may reflect some socially evolved mechanism of self-regulation. Thus the next section introduces the evolutionary perspective. Although everyone criticizes themselves, not everyone continues listening to the criticism and is able to enlist some form of self-compassionate processing to counter the self-criticisms, which is discussed in the next section. Unfortunately those high in self-criticism may not be able to muster the self-compassionate emotions required to stave off and shift the criticisms. The next section

discusses the involuntary subordinate / defeat strategies adopted by self-critics. Instead of eliciting self-compassionate emotions, those high in self-criticism may feel trapped by their own criticisms. When faced with psychosocial stressors, self-critics may also blame themselves for their problems rather than blame others. The next section proceeds with a discussion of the attachment ruptures (e.g., criticisms, threats, abuse, neglect) that may result in a self-critical personality structure. This self-criticism / self-blame may arise in childhood when self-critics find it safer to blame self than their much larger and more powerful parents. Additionally, attachment ruptures during childhood may alter physiological structures such that self-critics may not have access to positive self-soothing emotions. Self-criticism at its worst may instead reflect an emotionally stunted view of self. Finally this section ends with the rationale and hypotheses.

The Self

Robins, Norem, and Cheek (1999) contend that to have an understanding of human cognitive-behavioral-emotional processes, and the complexity and diversity of these processes among human beings, one must have an overall understanding of "the self." Rogers (1967) asserts that the self is a subjective, complex, and continually changing thing. Robins, Norem, and Cheek (1999) suggest that the self falls under two basic forms of phenomena: an ongoing sense of self-awareness or self-reflexivity (e.g., "I feel happy"), and stable mental representations - the symbolic self (e.g., "I am a happy person"). The symbolic self is what sets humans apart from other animals (Sedikides & Skowronski, 1997) and allows the self to play out different sequences in the mind before actually trying them out in the environment (Bandura, 1999). However, the symbolic self

can also work against an individual causing an impoverished sense of self-efficacy and self-worth, interpersonal distress, and other mental health issues as is witnessed in self-critical individuals. Bandura (1999) argues that not only is the self reflexive and symbolic, but by intentionally exploring and acting upon the environment, the self is also an agent of change. Robins, Norem, and Cheek (1999) add that social interaction, neurological function, and/or evolutionary adaptation can also contribute to development of the self.

Robins, Norem, and Cheek (1999) posit that the self performs four primary functions. The first function of the self involves filtering incoming information according to internal heuristics or schemas. This function is similar to Rogers' (1951) sense of "valuing" in which a positive or negative valence is attached to different things and situations. For example a positive valence may be attached to the taste of strawberries, whereas a negative valence may be attached to parental criticism. This filtering or valuing then directs future thoughts, emotional expression, and behaviors. However, Rogers (1967) warns that if the valuing process is left unexamined an individual may become guided by the values of others, which may result in the individual losing touch with their current experience and inner wisdom. It is Blatt and colleagues (Blatt, 1974, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) contention that self-critics introject the cold harsh values of their parents.

A second function of the self is to regulate thoughts, actions and feelings (Robins, Norem, & Cheek, 1999). Self-critic's tendency to access negative imagery over positive imagery may cause self-regulation problems (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006). Instead of appropriately assimilating all experience (including present experience)

into a congruent sense of self, discrepancies between an individual's actual self and an individual's ideals or obligations may cause neuroses (Higgins, 1985, Rogers, 1951). This presents a unique function of the symbolic self to link behavioral outcomes to self-conscious emotions (Gilbert, 2007, Sedikides & Skowronski, 1997). Self-discrepant templates or schemas often develop in childhood as a result of ongoing parental criticism, harsh punishments, rejection, or neglect (Higgins, 1985). Moreover these schemas can eventually become internalized conditions of "positive self-regard" (Rogers, 1951) or "contingencies of self-worth" (Higgins, 1985; Kammins & Dweck, 1999). As the actual-ideal/ought discrepancy increases, internal agitation increases, which interferes with self-regulation (Higgins, 1985, Rogers, 1951). Higgins (1985) posits that different types of discrepancies would result in different forms of dysregulation. For example an individual may feel disappointed or depressed if they fail to live up to their own ideals, whereas the individual may feel guilt or self-contempt if they fail to live up to their own obligations (Higgins, 1985). On the other hand an individual may feel embarrassment or shame if they fail to live up to the ideals of others, whereas they may feel anxious or threatened if they fail to live up to obligations to others (Higgins, 1985). Therefore an important function of the self is discern between real threats and threats to self-identity – a discernment quality somewhat lacking in self-critics (Gilbert, 2007)

A third function of the self is to understand and predict others' behaviors so that the self can survive and even thrive within the social environment (Robins, Norem, & Cheek, 1999). Closely related, the fourth function of the self involves the process of self-identification within the larger social context (Robins, Norem, & Cheek, 1999). This function allows one to be a distinct yet integral part of the whole. Self-identification helps

to determine one's status, roles, and affiliations, within society. Self-critics may identify themselves as being inferior to others (Sturman & Mongrain, 2005; Wyatt & Gilbert, 1998).

Rogers (1961) suggested that every life form has an intrinsic and positive motivation to develop its potentials to the fullest extent. He called this motivation the "actualizing tendency." White (1959) referred to this as "effectance motivation" – the organisms persistent drive to master the environment. The actualizing tendency is not a survival strategy per se, but a tendency of expansion. White (1959) suggests that an overall sense of gratification or pleasure accompanies this intrinsic drive, which in effect reinforces further exploration and manipulation of the environment. This expansion can continue until either internal (e.g., physiological limitations) or external (e.g., culture) boundaries are met.

Rogers (1961) outlined a number of qualities that a mentally healthy "fully functioning person" would possess, some of which include openness to experience, living in the here and now, trust, and self as process. To be open to experience the self would accept reality as is, including the full spectrum of emotions. Emotional experiencing is particularly important because it represents an organism's valuing process. Without being open to one's emotions, one's actualizing tendency can become distorted or thwarted. In being open to experience, the self also begins to reside more in the here and now of reality. If one does not live in the here and now, one may regret past decisions or fear future consequences. That is not to say that we do not learn from the past or plan for the future, it just means the fully functioning person lives where life is occurring – in the present.

Another condition of mental health is trust (Rogers, 1961). Trust involves an inner knowing that one has a right to exist, that the organism is essentially positive, and that the self is worthy. Trust relies upon the emotional valuing process to accurately interpret and weigh external social demands and internal creative impulses in order to follow the best direction that meets short and long term goals (Rogers, 1961). In other words trusting self means one is following their actualizing tendency. Furthermore, because one is open to experience, living in the present, and trustworthy, the individual will notice and correct unsatisfying consequences more quickly instead of dwelling on anxiety or self-chastisement.

Rogers (1961, 1967) also suggested that the fully functioning individual is constantly changing, or in the process of becoming, versus a fixed entity. This fluidity allows an individual to tolerate a certain degree of ambiguity and eventually integrate new experiences (including emotions) into a congruent gestalt of the self. The rigid individual may attempt to distort reality (including emotions) to fit preconceived notions of what reality should be (Rogers, 1961). Dweck and Leggett (1988) propose that mastery-oriented individuals are more likely to perceive their abilities and traits to be malleable and controllable, whereas helpless-oriented individuals are more likely to perceive their abilities and traits to be fixed and beyond their control. Consequently mastery-oriented individuals are more likely to explore their environments in order to increase competence, whereas helpless-oriented individuals tend to try to prove their abilities (Dweck & Leggett, 1988). Mastery-oriented individuals are also more likely view the environment as malleable and controllable, which promotes attempts to change undesirable external attributes, unlike helpless-oriented individuals who tend to feel

powerless to effect change. Overall, when the environment is supportive, Rogers (1951, 1961, 1967) views the self as an active agent thrusting out into life finding new ways to be creative. On the other hand, when the developmental environment is cold and harsh the actualizing tendency may become distorted, even self-defeating, and a self-critical personality structure may ensue.

Adaptive and Maladaptive Aspects of Self Processing

Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) view the self as "an organizing process" that is continually developing and adapting as person variables (e.g., beliefs, affects, actions) and environmental variables (e.g., society) interact. This "involves incorporation of new information into an existing structure [that] allows for either increased or decreased emotional responding," dependent upon whether the new information is consistent with or incompatible with existing structures (Foa & Kozak, 1986, p.22). These emotional responses serve to either "narrow" or "broaden" one's "thought action repertoire" (Tugade & Fredrickson, 2004). Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) do not necessarily view these emotional processes as being conscious, but rather intrinsic and sometimes unconscious processes that organize information and create experience. Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) postulate that when emotions are allowed full expression they will change and "shift," and a new self-organization will emerge. In essence the self knows itself and the world experientially, and new selves are created as emotions ebb and flow. For example, Greenberg and Malcolm (2002) found that those individuals who were able to express intense unresolved emotions and unmet interpersonal needs were

more likely to reaffirm self and restructure their view of others in a successful resolution of troublesome past experiences within therapy than those individuals who had difficulties accessing these emotions and needs.

However, Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) suggest that when emotional processing becomes interrupted on a continual basis, chronic and maladaptive emotional states may arise, which can lead to rigid and dysfunctional personality structures. Foa and Kozak (1986) suggest that individuals can become "neurotic" if they continue to avoid "discomfort-evoking information" about themselves or the environment. These individuals may continue to access, and be driven by "neurotic fear structures [that] are distinguished by erroneous representations of threat, high negative valence for a threatening event, and/or excessive response elements" (Foa & Kozak, 1986, p.32). By constantly and systematically attempting to avoid relatively harmless negative emotions, thoughts, activities, and interactions these individuals do not allow themselves the opportunity to incorporate disconfirming information and transform pre-existing negative emotional (i.e., fear) structures (Greenberg & Malcolm, 2002; Pos, Greenberg, Goldman, & Korman, 2003; Rauch & Foa, 2006). In essence, "being disconnected from emotional experience, therefore means being cut off from adaptive information" (Pos, Greenberg, Goldman, & Korman, 2003, p.1007). Foa and Kozak (1986) add that depressed individuals may be resistant to this emotional processing because interoceptive information is unavailable, arousal is excessive or minimal, higher order integration or learning is impeded, and external attributions of success obstruct self-efficacy beliefs.

Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990, p.159) suggest that there are four self-organizational states that are often associated with depression: the weak / bad self, the self-critical self, the self-hostile self, and the withdrawn essential self. The weak / bad self state involves feelings of weakness and hopelessness, self-perceptions of fragility and helplessness, a general sense of futility, and a desire to withdraw, give up, and disengage. Additionally, a feeling of shame for being so weak arises. Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) speculate that the bad / weak self develops as a result of drives that were thwarted in childhood. The self-critical state appears in response to current negative, critical, unsupportive interactions with others. Although most people "reflexively" engage in self-criticisms (Whelton & Greenberg, 2005), Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) suggest that depressed individuals will also enlist the hostile self-state, which intensifies these self-criticisms and condemns the weak / bad self. Gilbert (2006, p.293) suggests that what separates depressed individuals is their hostile self-critic and its ability to be "self-critical to such an extent that they literally beat themselves down into a depression and are 'harassed' repeatedly by their own negative self-evaluations." Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990) posit that this self-directed anger may reflect a prior internalization of a significant others' anger toward the individual. Finally, the essential self or core self reflects a natural organismic propensity to survive, grow, and connect. When this organismic drive meets harsh, severe, and unsupportive environments it tends to withdraw out of fear of further pain (Greenberg, Elliott, & Foerster, 1990). In summation Greenberg and colleagues (Greenberg, Elliott, & Foerster, 1990, p. 170) hypothesize:

> "Depression involves four experiential processes: negative or distorted thinking, associated hostile or punitive affect toward the self, such as anger or disgust, a weak / bad helpless self organization unable to counter the negativity and an unattended to, often fearful, hidden aspect of the self which is the essential, adaptive, organismic striving toward life and growth. Because this life force is not available, the essential, life sustaining, core self-organization is disengaged and when the helpless state is evoked, dysphoria ensues."

Thus when "emotion-schematic memories of crucial losses or failures in the formative years" (Whelton & Greenberg, 2005, p.1585) become activated in response to current perceptions of threat, loss, or failures,[1] self-critics may become unable to combat the negative states that drive their current cognitions, affect, and behaviors (Greenberg, Elliott, & Foerster, 1990). This may then activate genetically preprogrammed involuntary subordinate / defeat strategies (Sloman, Gilbert, & Hasey, 2003; Sturman & Mongrain, 2005; Wyatt & Gilbert, 1998). For example, Whelton and Greenberg (2005) found that self-critics displayed greater self-contempt, shame, self-submission, dysphoria, and lower resilience (autonomy, pride, assertiveness) in response to their own self criticisms than did non-self-critical controls. Similarly, Gilbert, Baldwin, Irons, Baccus, and Palmer (2006) found that self-critics easily accessed more elaborate and powerful self-critical images while at the same time experiencing difficulty accessing self-reassuring images, and this process was associated with elevated depressive symptomatology. Gilbert and Irons (2005) suggests that these findings provide support for the fact that self-critics tend to have an over-developed threat-fear based neurological system and an under-developed compassion-warmth based neurological system. Whelton and Greenberg (2005) added

that self-critics have not only internalized the content of the self-critical voice (often an introjected critical parent), but the(ir) emotional tones of contempt and disgust as well. Gilbert and colleagues (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006, p.185) suggests that "when we attack and criticize ourselves we are probably activating (some) similar brain pathways as if someone else was doing it."

The Evolutionary Streamlining of Human Potential

It has been suggested that genes are not necessarily the drivers of life, but co-creators with the environment. Genes require environmental stimulation to become activated in order to act upon the self or the environment (Buck, 2002; Gilbert, 2005; Lipton, 2005; Rossi, 2002). One of the mechanisms / strategies that have evolved to guide humans throughout life is emotion (Damasio, 1998; Greenberg, 2002). Although certain emotional structures exist "hardwired" within the brain they also require environmental stimulation from the environment to become fully developed and expressed (Panksepp, 2001; Perry, 2002; Schore, 2001). This suggests that humans are not a closed loop, but each individual is dependent upon information and emotional input (e.g., love, warmth, caring, compassion) from others in order to function (Lewis, Amini, Lannon, 2000). On the other hand, an environment perceived as dangerous may stimulate over-development of the Involuntary Defeat Strategy (Sloman, Gilbert, & Hasey, 2003) in order to prevent harm. Although many genetic potentials exist, a specific environment only requires or allows the expression of a certain subset of those potentials. From an evolutionary perspective, these genetic potentials in interaction with the environment have over time led to the expression of human bio-psycho-social responses.

Continuing this evolutionary argument then, humans have the potential of expressing a multitude of bio-psycho-social responses but only a limited number are actually expressed. For example, in the process of language formation a child makes numerous sounds, which are eventually streamlined to a limited number of sounds that make up the child's parents' native language (Bloom, 1970; Slobin, 1970). Without parental stimulation occurring within a specific genetically predetermined formative period, these sounds die off, the child does not develop language, and future language acquisition becomes difficult (Chomsky, 1957). Similarly, without appropriate parental stimulation of emotion and without appropriate parental socialization of emotional meaning and expression, an individual can be left with an unbalanced or stunted emotional structure, which may affect their social-cognitive-behavioral-motivational responses (Buck, 1999; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz, & Hooven, 1997; Perry, 2002).

This streamlining of genetic potential is a co-creative process of interaction between genes and the environment: The environment provides situational stimulation and input for certain gene expression. The activated genes in turn seek to act upon and replicate environments that will provide the stimulation and input similar to the original environment (Caporael, 1997; Gilbert, 2005). Replication of the environment would in turn promote successful survival, replication, and evolution of the genes. This process can be noted in the gradual evolution of societies. Gilbert (2005) notes that only when environmental stress is relatively constant or gradually builds up can genes and environments co-replicate. Genes may not cope and survive when environmental changes are sudden and large (e.g., meteorite, plague).

Similarly, there is a co-creative process of interaction between the individual and their social environment: The social environment provides stimulation and input information, which provokes certain states within the individual and triggers certain responses. At the same time the individual attempts to shape their social environment by creating certain states (e.g., affiliative, submissive) within others that would match the individual's internal states and attributes (Buck, 2002; Gilbert, 2005). Gilbert (2005) notes that because these strategies operate on an interpersonal level in one person's attempt to influence another's state of mind, then these strategies must also be operating on an intrapersonal level. One's state of mind is influenced by others, but one's state of mind is also attempting to influence certain states in others. Just as peoples' motives can conflict with each other, so can an individual's states of mind conflict such that a person may internally desire one thing but act in another way. This internal conflict may create conditional positive self-regard, self-worth contingencies, emotional ambivalence, or cognitive dissonance within the individual (Higgins, 1985; Kammins & Dweck, 1999; King & Emmons, 1990; Festinger, 1957; Rogers, 1951). In other words if an individual is unable to change their environment, they may attempt to change the self (Younger, 1991). However, every strategy is adaptive up to a point, after which these self-oriented strategies may become maladaptive, and even pathological (Sloman, Gilbert, & Hasey, 2003). Self-critics may utilize pathological strategies such as attempts to punish or "cleanse" the self (Gilbert, Clarke, Hempel, Miles, & Irons, 2004), and interpersonal strategies that will inadvertently verify the self as shameful and worthy of self-punishment (Swann, 1987, 1992, 1997; Swann, Wenzlaff, Krull, & Pelham, 1992).

Perhaps human beings most prominent expression of evolutionary potential is our ability for symbolic representation (Gilbert, 2005). This ability allows us to mentally manipulate symbols / concepts before physically engaging in a potentially dangerous environment (Robins, Norem, & Cheek, 1999). Our ability for symbolic representation allows humans to have complex languages, societies, gods, art, and technological advances. However symbolic representation is a double edged sword in that humans can start to believe their own thoughts over and above environmental input to the contrary (Gilbert, 2005; Hayes, Barnes-Holmes, & Roche, 2001). Consequently, people can feel threatened by their own thoughts (e.g., I'm not appealing enough, I must do it perfectly). Threat requires strategies that either mobilize resources in order to fight or flee the threat, or inhibit resources in hopes of going undetected, and/or appeasing the threatening force. Gilbert (2005) notes that these strategies can also be utilized to deal with our own internal symbolic threats. Unregulated negative self-conscious emotions and self-attacking strategies in combination with depressed life-sustaining positive emotions can very much reflect the internal world of self-critics.

Self-Criticism from an Evolutionary Perspective

Sloman, Gilbert, and Hasey (2003) suggest that certain forms of depression may represent the maladaptive effects of the prolonged use of evolutionary defense strategies that normally in the short run produce adaptive results. These defenses may help regulate emotion and behavior, and preserve life and limb (Sloman, Gilbert, & Hasey, 2003). Attachment and social rank represent two primary evolved regulatory strategies (Sloman, Gilbert, & Hasey, 2003). Adults and children go through a similar repertoire of strategies

when separated from the safety and comfort of their attachment figures (Ainsworth, Blehar, Waters, & Wall, 1978; Bartholomew, & Horowitz, 1991; Bowlby, 1969; Cassidy, 1994; Hazan, & Shaver, 1987). When first separated, securely attached individuals engage in mobilization strategies, such as seeking behavior and vocalizations of distress in order to regain connection with the attachment figure. Reconnection with the attachment figure has the effect of soothing the distress (Gilbert & Procter, 2006) and activating positive emotions and exploratory behaviors (Bowlby, 1969; Fredrickson, 1998a). However, if the separation is prolonged these individuals may invoke demobilization strategies (negative emotions, withdrawal) in order to conserve resources (Sloman, Gilbert, & Hasey, 2003). Adults' superior ability for symbolic representation means that they can sustain the emotionally regulating effects of the symbol of their attachment figures for much longer periods of time than can children. Insecurely attached adults however, may experience symbolic distortions, which can cause difficulties with regulating emotions.

Every child must eventually detach from their caregivers in order to compete in the larger social environment (Sloman, Gilbert, & Hasey, 2003). One must compete for jobs, resources, status, mates, etc. However, in every competition there must be winners and losers. And yet very few interpersonal competitions are a fight to the death. Instead the Involuntary Defeat Strategy becomes activated when one perceives the inevitability of defeat (Sloman, Gilbert, & Hasey, 2003). This strategy is considered to be involuntary because it is thought to be genetically preprogrammed, and it is considered to be a defeat strategy because its function is to discontinue hierarchical interpersonal struggles and avoid further harm (Sloman, Gilbert, & Hasey, 2003). This strategy may include attempts

to enlist help or to escape the situation, but if help or escape is not possible the individual may then attempt to appease the victor by acting in a submissive manner. Sloman, Gilbert, and Hasey (2003, p.111) state that "both defeat and attachment losses can be signals to down regulate positive affect and reduce explorative and resource acquiring behavior." However, as previously noted these strategies can become maladaptive if the (real or symbolic) threat persists or if the strategy is simply ineffective. Gilbert and colleagues (Gilbert, Cheung, Grandfield, Campey, Irons, 2003; Gilbert, McEwan, Hay, Irons, & Cheung, 2007; Irons, & Gilbert, 2005) found that depressed individuals were more likely to rate themselves as insecurely attached and inferior to others, they were more likely to recall engaging in submissive behaviors in response to their parents' controlling, rejecting, or threatening behaviors, and they were more likely to report currently engaging in submissive interpersonal behaviors.

As such, it appears likely that self-critics' symbolic or introjected perceptions of unworthiness and threat can prolong the down regulating effects of the Involuntary Defeat Strategy well after the actual threat has passed. In other words, an individual's self-criticisms are "internal stimuli that act as social stimuli that the brain can treat like real (threat-focused) interactions" (Gilbert & Procter, 2006). Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) suggest that self-criticism may serve a number of forms and functions such as self correction, efforts to improve one's performance, attempts to prevent errors, expressions of frustration with oneself. However, when self-criticism becomes prolonged it may devolve into more maladaptive self-hating forms and self-persecutory functions (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) and even self-destruction (Blatt, 1995). Whelton and Henkelman (2002)

found patients' self-critical responses fell under eight primary qualitative clusters: demands and orders; exhorting and preaching; explanations and excuses; inducing fear and anxiety; concern, protection, and support description; explore puzzle / existential; and self-attack and condemnation. Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) suggest that the forms and functions of self-criticism may be adapted from learned skills that regulate external interpersonal relationships. In other words, "one learns to relate to self as others have related to self" (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006, p.184). For example reacting in a submissive way to critical parents may be adapted to reacting in a submissive fashion to one's own criticisms in order to correct behavior and prevent future mistakes. However, just as human beings can deliberately attack other humans with callous indifference, this interpersonal strategy can also be internalized in order to subordinate or "cleanse" the self (Gilbert, 2005). Thus an individual can be quite self-persecutory / self-destructive in their self-criticisms, while at the same time being quite indifferent to how much pain and struggle this creates within the self. As in ethnic cleansings, the individual's submissive and appeasing emotional-behavioral strategies may not be enough to stave off the attacks on self (Gilbert, Clarke, Hempel, Miles, & Irons, 2004).

In attempt to further explore the interactions between the forms and functions of self-criticism, Gilbert, Clarke, Hempel, Miles, and Irons (2004) found that a self-correcting function of self-criticism was weakly and inversely mediated by self-hatred in predicting depression, whereas a self-persecuting function of self-criticism was strongly and positively mediated by self-hatred in predicting depression. Gilbert and colleagues (Gilbert, Birchwood, Gilbert, Trower, Hay, Murray, Meaden, Olsen, & Miles, 2001)

found that there was no difference in the power of self-persecutory voices / thoughts between schizophrenics and depressed individuals, albeit the depressed individuals were aware of the fact that these thoughts were self-generated, despite their powerlessness to counter these self-persecutory thoughts. Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) conclude that for highly self-critical individual's self-hatred and self-persecution may suppress the more positive aspects of self-criticism (self-correction), and more helpful regulating mechanisms (self-compassion). Left unchecked, this unbridled self-hatred and self-persecution may lead to interpersonal distress and other mental health issues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004).

Self-Compassion

Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) caution that challenging a self-critic's thoughts and self-perceptions may only lead to the verification of the self as a failure (Swann, 1987, 1992, 1997; Swann, Wenzlaff, Krull, & Pelham, 1992). Alternatively, Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Gilbert & Irons, 2005; Gilbert & Procter, 2006; Lee, 2005) suggest that therapy be aimed at balancing self-criticism with self-compassion. And because self-critics tend to have an abundance of negative affect and a dearth of positive affect (Dunkley, Zuroff, & Blankstein, 2006; Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000; Zuroff, Moskowitz, & Cote, 1999) "therapy needs to use 'language' the amygdala understands – the sensory experience of attack" in order to establish a balance between self-compassionate positive emotions and self-critical negative emotions (Lee, 2005, p.331).

Neff (2003) suggests that self-compassion entails three components: self-kindness, common humanity, and mindfulness. Self compassion involves having a sense of "we-ness" or "connectedness" (Gilbert, 2005); the ability to identify with the common human experience and its incumbent sufferings, failures, and inadequacies (as well as joys and triumphs), and the fact that all people – the self included - are worthy of compassion (Neff, 2003). Self-critics tend to experience social disconnection, which would make identifying with the common human experience difficult. Self-compassion also tempers self-criticism with the positive emotions of kindness and forgiveness towards the self, and in so doing allows the generation of plans to alleviate distress with "gentleness and patience" (Neff, 2003; see also Fredrickson, 1998a). Harsh self-criticism on the other hand, may lead to "over-identification" (Bennett-Goleman, 2001) or excessive "rumination" (Nolen-Hoeksema, 1991), which so consume and overwhelm cognitive-emotional processes that "other aspects of the person – those capable of alternative emotional responses or mental representations, for example – are inaccessible" (Neff, 2003, p.88; see also Fredrickson, 1998a; Greenberg, Elliott, & Foerster, 1990). This over-identification can involve a magnification of one's failings – one's unique failings – which has the effect of separating the individual from the common human experience and isolating the individual from interpersonal resources (Neff, 2003).

Finally, self-compassion also entails the ability to step back from one's negative emotions, and clearly or mindfully view them from a more balanced perspective. Attempting to repress or avoid painful emotions does not allow the person to generate self-compassionate feelings, it does not allow accurate appraisal of reality, and it leaves inadequacies unchallenged (Neff, 2003). Self-critics propensity to avoid self-perceived

threats and losses (albeit inefficiently so) would suggest that mindfulness would also be a useful aspect of self-compassion for self-critics to learn.

As can be seen from the above descriptions, there appears to be some overlap in operationalization of aspects of the self-compassion and emotional intelligence constructs. Self-compassionate "mindfulness" entails an awareness of "ones painful thoughts and emotions" (Neff, 2003, p.89), whereas emotionally intelligent "attention" entails "the degree to which individuals notice and think about their feelings" (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995, p.128). Furthermore, self-compassionate "mindfulness" also entails an awareness of emotions that is "balanced, non-judgmental, and detached" without becoming "over-identified" with one's emotions" (Neff, 2003, p.89). Clarity entails a similar ability to "understand and discriminate between" specific emotions (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), without becoming "overwhelmed" by their intensity (Gohm, 2003). Self-compassionate "self-kindness," on the other hand, entails the extension of "kindness and understanding to oneself rather than harsh judgment and self-criticism" (Neff, 2003, p.89), whereas, emotionally intelligent "repair" entails "the degree to which individuals moderate their moods" using such strategies as focusing on "all the little pleasures in life" (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995, p.128). The self-compassionate individual's ability to view one's experience as part of the larger human experience, or "common humanity" (Neff, 2003), is more reflective of a meta-emotional view that emotions are a natural human capacity and that negative emotions are learning experiences (Gottman, Fainsilber-Katz, & Hooven, 1996). As with emotional intelligence (Buck, 1999; Mayer, Caruso, & Salovey, 2000b; Zeidner, Roberts, & Matthews, 2002), Neff (2003) speculates that self-

compassion develops in a positive family environment where parents are warm and supportive.

Altruism is an evolutionary strategy that increases group (albeit not necessarily individual) genetic fitness (Gilbert, 2005). Although humans can be quite coercive or vengeful, humans also have an affiliative drive. Just as self-criticism can be an evolved strategy arising from the interpersonal social ranking systems of power and dominance, so too can self-compassion be an evolved strategy arising from the interpersonal strategies of care and altruism (Gilbert, 2005). Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Gilbert & Procter, 2006) suggest that this desire to be compassionate to others may be internalized as an ability to be self-compassionate / self-reassuring even when one fails to live up to standards and expectations. This would bring into play positive emotions, which can be used as a resource in ameliorating negative moods and depressive symptoms (Fredrickson, 1998a; Tugade & Fredrickson, 2004).

Gilbert, Clarke, Hempel, Miles, and Irons (2004) found that the self-correcting function of self-criticism was weakly but positively mediated by self-reassurance in preventing depression, whereas the self-persecutory function of self-criticism was moderately and inversely mediated by self-reassurance in preventing depression. Furthermore, despite their ability to generate self-critical images, those high in trait self-reassurance generated self-reassuring images more easily, which tended to prevent depressive symptomatology (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006). Tugade and Fredrickson (2004) found that "resilient" individuals were more capable of generating positive emotions in order to cope with stressful events. More specifically they found that positive emotions fully mediated the relationship between resiliency and

emotional regulation. Emotional regulation was measured as the ability to find positive meaning within negative circumstances, and as the speed at which individuals returned to baseline cardiovascular activity following stressful events perceived as threatening. Gilbert and colleagues (Gilbert, Clarke, Hempel, Miles, & Irons, 2004) suggests that the ability to calm oneself down, to empathize with one's own distress, to muster one's resources, to focus on positives or past successes, and to tolerate disappointment and vulnerability are qualities necessary to regulate and counter the pathological effects of self-criticism.

Unfortunately, it appears that individuals high in self-criticism do not tend to have the self-compassionate positive emotions required to regulate the effects of their own self-criticisms (Blatt, 1974; Blatt & Shichman, 1983, Bergner, 1995; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gilbert, Clarke, Hempel, Miles, & Irons, 2004). Instead it appears that self-critics' feelings of guilt and shame, overcompensation of self-perceived inadequacies, and attempts to avoid others' criticisms may overwhelm their cognitive capacity such that positive emotions and positive experiences are overshadowed diminishing their enjoyment of life and their satisfaction with accomplishments (Blatt, 2004). This may reflect self-critics' low emotional intelligence – their general difficulty accessing, utilizing, and regulating emotional information necessary for adaptive functioning. For example, self-criticism and socially prescribed perfectionism have been found to be correlated with alexithymia (Lundh, Johnson, Sundqvist, & Olsson, 2002; Speranza, Atger, Corcos, Loas, Guilbaud, Stephan, Perez-Diaz, Halfon, Venisse, Bizouard, Lang, Flament, & Jeammet, 2003; Speranza, Corcos, Loas, Stephan, Guilbaud, Perez-Diaz, Venisse, Bizouard, Halfon, Flament, & Jeammet, 2005; Speranza, Corcos,

Stephan, Loas, Perez-Diaz, Lang, Venisse, Bizouard, Flament, Halfon, & Jeammet, 2004), a construct which entails difficulty accessing emotion and imagination (Parker, Taylor, & Bagby, 2001), and which is inversely correlated with aspects of emotional intelligence (Parker, Taylor, & Bagby, 2001; Saklofske, Austin, & Minski, 2003; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998).

Mongrain and Zuroff (1994) found that self-criticism was mediated by emotional ambivalence (in particular conflict over emotional expression) in predicting depressive symptoms. Emotional ambivalence entails an internalized conflict over expressing both positive and negative emotions via the processes of inhibition and rumination (King & Emmons, 1990). Emotional ambivalence has also been associated with alexithymia (Quinton & Wagner, 2005). Mongrain and Zuroff (1994) posit that the interruptions of emotional experience may prevent the utilization of adaptive responses (e.g., task-oriented coping, positive emotions, social resources) and instead leave only maladaptive responses (e.g., rumination, emotion-oriented coping). For example, Frost and DiBartolo (2002; see also Hewitt & Flett, 2002) found that perfectionists ruminate about their mistakes long after the situation has past, which adds to their experience of anxiety and distress. This rumination also leads to self-conscious emotions such as guilt, embarrassment, and in particular shame (Tangney, 2002). Lynch, Robins, Morse, and Krause (2001) suggest that repeated attempts to avoid aversive highly aroused affective states might result in a reduced sense of self-efficacy, and despite the possibility of temporary respite, long-term failure to reduce aversive emotions might result in shame and hopelessness.

Self-Critical Anger and Entrapment

Not only are self-critics wanting to avoid or escape aversive stimuli (internal or external), but their low self-esteem would likely lead to a sense of being trapped and/or social inferiority. For example, Sturman and Mongrain (2005) found that self-critics endorsed feelings of being trapped / unable to escape and self-perceptions of social inferiority. These submissive stances also contributed to diagnoses of depression. Gilbert and colleagues (Gilbert, Birchwood, Gilbert, Trower, Hay, Murray, Meaden, Olsen, & Miles, 2001) found that the more dominating / powerful one's self-critical thoughts, the more inferior and weak an individual would feel in comparison to other people. Gilbert and Allan (1998) suggest that after losing conflicts to more powerful individuals, people will feel "defeated" and engage in submissive behaviors. Furthermore, if the adaptive fight-or-flight responses become repeatedly blocked, physiological arousal (e.g., elevated cortisol), learned helplessness, depression, and other psychopathologies may ensue (Gilbert & Allan, 1998; Gilbert, Gilbert, & Irons, 2004), as well a reduced exploration and engagement with the environment (Gilbert, Allan, Brough, Melley, & Miles, 2002). Gilbert and Allan (1998) found that defeat and entrapment (thwarted desire to escape) both predicted depressive symptoms over and above the effects of hopelessness, self-perceived social inferiority, and submissive behaviors.

Self-critics likely face a particularly difficult conundrum. On the one hand they may feel defeated and engage in submissive behaviors in order to appease their internal hostile self-critic (Gilbert, Clarke, Hempel, Miles, Irons, 2004; Sloman, Gilbert, & Hasey, 2003). On the other hand, self-critics denial of the status quo and their drive to achieve and be competitive may interfere with their ability to accept failures and defeat (Sturman

& Mongrain, 2005; Sloman, Gilbert, & Hasey, 2003). In an evolutionary sense, submissive behaviors lead to an understanding of social dominance between two combatants, which reduces the risk of injury. However, if neither side is willing to accept defeat, injuries may be incurred. Since self-critics may be unwilling to accept defeat they may then feel eternally trapped in battle with their internal hostile counterpart – the urge to fight and the urge to flee both activated at the same time, perpetuating their sense of distress (Sloman, Gilbert, & Hasey, 2003). Interestingly, despite the self-blaming attributional style championed by Beck (Beck, Steer, & Garbin, 1988), Gilbert, Gilbert, and Irons (2004) found that 45 out of a sample of 50 depressed individuals blamed external events or other people for their difficulty in escaping adverse circumstances. Thus self-critics may be unwilling to accept defeat, engage in ineffective submissive behaviors / thoughts, and feel trapped. These conditions may lead to low self-esteem and a sense of social inferiority. Furthermore, Sturman and Mongrain (2005) suggest that self-critics' sense of inferiority and their competitive nature would likely amplify and distort self-critics' perceptions of threat or loss in others' actions and comments.

Not only would self-critics' sense of inferiority and their competitive nature distort harmless external events, but actual criticisms as well. Although self-critics perceive others' criticisms as hostile (Vettese & Mongrain, 2000), they are also more likely to blame themselves for another's criticisms rather than blame the other person (Gilbert, Durrant, & McEwan, 2006). In so doing, self-critics' interpersonal interactions tend to become more disagreeable and less cooperative (Santor, Pringle, & Israeli, 2000) while at the same time they tend to solicit additional criticisms after initial criticisms have been made (Santor & Yazbek, 2006). This behavior can lead to diminished satisfaction

with performance (Santor & Yazbek, 2006), disengagement with pleasant activities (Zuroff, Moskowitz, & Cote, 1999), interpersonal disengagement (Mongrain, 1998; Mongrain & Zuroff, 1994; Zuroff & Fitzpatrick, 1995), verification of self-critical attitudes (Swann, 1987, 1992, 1997; Swann, Wenzlaff, Krull, & Pelham, 1992), and depressive symptoms (Besser, Flett, & Davis, 2003; Besser & Priel, 2003a, 2003b; Cox, Fleet, & Stein, 2004; Cox, McWilliams, Enns, & Clara, 2004; Enns, Cox, & Inayatulla, 2003; Fehon, Grilo, & Martino, 2000; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Mongrain, Lubbers, & Struthers, 2004; Mongrain, Vettese, Shuster, & Kendal, 1998; Mongrain & Zuroff, 1994; Sachs-Ericsson, Verona, Joiner, & Preacher, 2006; Shahar, Henrich, Blatt, Ryan, & Little, 2003; Shahar, Joiner, Zuroff, & Blatt, 2004; Sturman & Mongrain, 2005; Vettese & Mongrain, 2000; Whelton & Greenberg, 2005; Whiffen, Parker, Wilhelm, Mitchell, & Malhi, 2003; Zuroff & Duncan, 1999).

While some people with a "robust" sense of self are able to dismiss or defend against others' criticisms (Gilbert & Miles, 2000), it appears that self-critics learn it is more expedient and safer to blame self for others' transgressions than to blame the others (Gilbert, Durrant, & McEwan, 2006; Gilbert & Irons, 2005; see also Bowlby, 1980; Wenzlaff & Eisenberg, 1998). Gilbert and Irons (2005) notes that certain affiliative interpersonal strategies may not work within certain critical or hostile environments. For example, if one expresses anger at another, then the possibility of rejection arises. This potential rejection may create anxiety within the individual, which if high enough may subdue the anger. Repeated pairings of anger and anxiety may lead to a conditioned response of suppressing anger (Gilbert & Irons, 2005; see also Ferster, 1973; Gilbert & Procter, 2006). Gilbert and Irons (2005) add that for self-critics the process of

acknowledging and challenging anger would only confirm their beliefs of unworthiness and the need for self-correction / self-persecution.

Self-blame tends to increase the more the individual is dependent upon the criticizer or the more the criticizer is perceived as superior (Gilbert & Miles, 2000). However, self-blame may eventually become a self-critic's well-worn, but dysfunctional "safety strategy" in order to cope with environments that are perceived of as hostile (Gilbert, Durrant, & McEwan, 2006; Gilbert & Irons, 2005). Despite self-critics best efforts to avoid exposure to failure and criticism, their incongruous behaviors do not go unnoticed by others. Others may perceive self-critics as depressed (Besser & Priel, 2003a), cold (Zuroff, Moskowitz, & Cote, 1999), aloof (Mongrain, 1998; Powers, & Zuroff, 1988), and hostile (Mongrain, Vettese, Shuster, & Kendal, 1998; Vettese & Mongrain, 2000; Zuroff & Duncan, 1999). These negative perceptions may eventually lead to the same interpersonal criticism and rejection that self-critics are trying to avoid (Zuroff, Moskowitz, & Cote, 1999; see also Hammen, 1991; Joiner, Alfano, & Metalsky, 1992).

The Development of Self-Critical Emotions

Children are in a position in which they are dependent on parents who have greater cognitive capacities and necessary resources. This leaves children vulnerable and they must accept, or at least tolerate, the way in which their parents choose to raise them. Although parenting is not usually without criticisms of the child – criticism directs appropriate behavior – it is the frequency and the presentation of the criticisms that make the difference. When criticisms are presented in the context of warm, supportive, emotion

coaching parenting, children will likely develop discriminative clarity about the emotions of self and others (Gottman, Fainsilber-Katz, & Hooven, 1996), the ability to self-regulate negative emotions (Eisenberg, Cumberland, & Spinrad, 1998; Schore, 2001), self-compassionate / self-reassuring capabilities (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Neff, 2003), emotional intelligence (Mayer, Caruso, & Salovey, 2000b), affective social competence (Halberstadt, Denham, & Dunsmore, 2001), and the ability to self-generate positive emotions that build physical, intellectual, and social resources (Fredrickson, 1998b).

However, Gilbert and colleagues (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; see also Blatt, 1974, 2004; Buck, 1999; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Fainsilber-Katz, & Hooven, 1996; Perry, 2002; Schore, 2001) warns that children raised in neglectful, critical, deprecatory, threatening, or abusive environments are at risk of developing a number of problems. The first problem involves the repetitious "over-stimulation" of the fight-or-flight neural pathways in childhood, which can lead to long term hyper-reactivity, negative affect, maladaptive behaviors, and psychopathology (Buck, 1999; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gottman, Fainsilber-Katz, & Hooven, 1996; Panksepp, 2001; Perry; 2002; Schore, 2001). Because children are unlikely to fight or flee their harsh parental environment, some of them will likely attempt to appease their parents by behaving submissively. Over time these submissive fear-based strategies can become sensitized, kindled, and conditioned such that the individual grows up with a personality pattern that entails self-criticalness / self-condemnation, perceptions of self as inferior and weak, perceptions of others as dominant and threatening, and an exaggerated threat-defense (damage minimization or "better safe

than sorry") strategy (Gilbert & Irons, 2005). These self-critical personality patterns may be resistant to change because of imbalanced neurological structures (Panksepp, 2001; Perry; 2002; Schore, 2001) and because the individual may fear losing their only strategy to prevent criticism and retribution (Gilbert & Irons, 2005).

A second problem that arises from a harsh parental environment involves the "under stimulation" of the positive and calming affective neural pathways, as well as a dearth of positive interpersonal role models, which may lead to long-term difficulty accessing positive emotions and their concurrent adaptive functions (Bandura, 1977; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gottman, Fainsilber-Katz, & Hooven, 1996; Panksepp, 2001; Perry; 2002; Schore, 2001). Difficulty accessing positive emotions in self may interfere with one's ability to influence another's state of mind in generating reciprocal positive emotions (Gilbert, 2005). A dearth of reciprocal positive affect from others may be interpreted by the self as verification of unworthiness (Swann, 1987, 1992, 1997; Swann, Wenzlaff, Krull, & Pelham, 1992), which will only increase negative affects. This difficulty generating reciprocal positive affects in others could potentially lead to two conflicting life strategies: one focused on self-improvement in order to make one more acceptable to others; the other focused on withdrawal or being submissive in order to avoid or appease others' criticisms and rejection (Gilbert, 2005). As noted, the inability to self-soothe may also lead to an internal conflict to compete and dominate or to submit (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Sturman & Mongrain, 2005). Left unresolved, this battle of conflicting internal and external life strategies (Gilbert, 2005) may lead to the development of a long-standing depressive personality orientation referred to as self-criticism (Blatt, 2004).

Not only are children dependent upon parents for protection, food, and other resources, but children are also dependent upon parents for emotional regulation (Cassidy, 1994; Schore, 2001). As such, children adapt according to the particular environment in which they are raised (Gilbert, 2007). When parent-child interactions are secure / synchronous, children learn appropriate regulation strategies to the point that they eventually learn self-regulation strategies. When parent-child interactions are insecure / out of synchrony for prolonged periods of time during childhood, children may adopt alternative attachment strategies, either escalating or suppressing negative emotional expression (Cassidy, 1994). Although these strategies may ensure the provision of parental protection and resource allocation required for the child's survival, these strategies may not reduce physiological or affective arousal or teach the child appropriate self-regulation (Sloman, Gilbert, & Hasey, 2003).

Gilbert and colleagues (Sloman, Gilbert, & Hasey, 2003) note that as children mature into adults they must eventually master the larger interpersonal environment and its hierarchical structures. If social competition leads to success, one's social status and positive emotions are enhanced, which in turn lead to increased exploration and resource gathering (Sloman, Gilbert, & Hasey, 2003). Even if social competition results in a defeat, the secure individual's attachment figure may provide the reassurance required to regulate one's negative emotions and to re-engage in exploration and resource gathering (Sloman, Gilbert, & Hasey, 2003). Therefore, the attachment and social ranking strategies have "complementary" effects in regulating emotions (Sloman, Gilbert, & Hasey, 2003).

Problems may arise when the individual experienced parents as controlling, rejecting, or threatening and consequently failed to learn attachment strategies that help

them to appropriately regulate negative emotions (Gilbert, Cheung, Grandfield, Campey, Irons, 2003). Later in life, when faced with interpersonal competition, these insecurely attached individuals may struggle to regulate emotions and elicit the support of other attachment figures (Sloman, Gilbert, & Hasey, 2003). Faced with potential defeat and rejection, they may focus on their achievements and redouble efforts to gain approval, which would increase exposure to competition – a vicious cycle (Sturman & Mongrain, 2005; Sloman, Gilbert, & Hasey, 2003).

Blatt (Blatt, 1974, 2004, Blatt & Shichman, 1983) has presented an in-depth, well researched theory of maladaptive development and of the maladaptive personality variables that develop as a result. Specific to this research, Blatt (Blatt, 1974, 2004, Blatt & Shichman, 1983) suggests that exposure to cold, critical, harsh parenting, in particular during the second year of life, can lead to an abnormal preoccupation with self-definition. Prolonged exposure to this form of unsupportive parenting then likely leaves the child with an over-developed threat system and an under-developed self-regulating / self-soothing system (Gilbert, 2005). Prolonged failure to regulate negative emotions caused by attachment ruptures and later further reinforced by social defeats may eventually lead to a sense of inferiority and worthlessness (Sloman, Gilbert, & Hasey, 2003). Self-criticisms originally intended to redirect and/or to improve one's performance may over long periods become more maladaptive self-hatred / self-persecutory strategies (Gilbert, Clarke, Hempel, Miles, & Irons, 2004). Thus it appears that that the parenting practices that self-critics had to endure has affected their ability to utilize the adaptive functions of emotions (Fredrickson, 1998a; Frijda, 1986; Greenberg, 2002). Consequently, self-critics are prone to experience heightened states of negative affect, suppressed positive affects,

interpersonal distress and other mental health issues, and a risk of suicide or psychopathology (Bergner, 1995; Blatt, 1995, 2004).

Heimpel, Wood, Marshall, and Brown (2002) suggest that an inordinate amount of cognitive-emotional processing is devoted to self-criticism that little time and energy is left for some form of problem solving to alleviate negative moods. They add that self-criticism may also diminish self-efficacy or the expectation that one can change one's negative emotions (see also Bandura & Cervone, 1984), which de-motivates self-critics to make the effort to regulate negative emotions. As such, self-critics appear to be so beaten down by their own hostile thoughts and emotions (Gilbert, 2006; Greenberg, Elliott, & Foerster, 1990) and their efforts just to survive that they are unable to elicit positive, self-compassionate emotions that would revive their organismic drive to thrive (Fredrickson, 1998; Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Greenberg, Elliott, & Foerster, 1990; Neff, 2003). In other words self-critics' developmental trajectory has disrupted their ability to access and utilize emotional information as well as disrupting their ability to regulate negative emotions. The ability to access and utilize emotional information while regulating negative emotions has been referred to as emotional intelligence (Mayer & Salovey, 1990). The purpose of this study then is to integrate the emotional intelligence literature with that of the self-criticism literature and to provide a fuller understanding of how self-criticism evolves to disrupt the adaptive functions of emotion.

Summary of the Relating Self-Criticism and Emotion Section

Children adapt to their environments. Children are reliant upon their parents for resources and protection. In the event of external threats and/or parental absence, children

respond in genetically preprogrammed ways in order to regain connection to their parents. However, when parents are the external threat (e.g., criticisms, derogations, rejection, threats, abuse), children may develop strategies to avoid the threat while maintaining as much protection and resources from their parents as possible. These responses may include suppression of emotional expression, hyper-vigilance of the environment, a focus upon achieving high standards to avoid retribution, self-monitoring / self-scrutiny of performance, and self-blame / self-criticism / self-punishment when performance is not sufficient to avoid parental retribution. Under prolonged threat, these involuntary defeat strategies may become habitual and form the basis of the self-critical personality structure. However, these self-critical strategies may not help the adult interact and compete in a real world, which presents many setbacks, but few real threats. Self-critics may be unable to distinguish real threats from threats to self-identity. They may be unable to appropriately process emotional information. Self-critics may be unable to access and utilize any emotions other than those indicating threat. In other words, self-critics may be numb to their own discomfort and pain. As such, self-critics may be unable to counter their sense of shame, inferiority and self-disgust with a sense of self-compassion. This whole process can leave self-critics in a fruitless struggle of trying to prove their worthiness in order to avoid criticisms and rejection, while at the same time being unable to trust others enough to reach out for help. This leaves self-critics vulnerable to interpersonal problems and other mental health issues. Despite the forgoing propositions, research has generally only studied portions of the entire developmental process of self-criticism. Furthermore, emotional processes involved in self-criticism are

often ignored. More needs to be known about the emotional processes and the psychosocial sequelae involved in the development processes of self-criticism.

Rationale for the Study

Throughout this literature review an extensive array of empirical documentation has been reviewed buttressing the view that exposure to anomalous parenting experiences (parental over-control and indifference / coldness) while growing up will lead to self-criticism. It has also been suggested that exposure to positive experiences with parents while growing up is associated with more flexible meta-emotional structures, emotional intelligence, and an enhanced ability to regulate one's emotions in order to cope with distressing situations. This literature review has also suggested that self-critics face distorted emotional experiences, which will exacerbate their risk of interpersonal distress and other mental health issues. Little, if any, empirical work has been done attempting to track the developmental pathways of self-criticism and emotional intelligence in unison. While it seems intuitively correct to speculate that self-criticism as a personality trait has family roots that are inversely proportional to the roots of healthy emotional regulation, it is important to attempt an empirical test of this idea. Nor does it appear that the interpersonal distress and other mental health consequences of self-criticism and emotional intelligence have yet been studied in parallel. Thus two retrospective measures of childhood experiences were combined with measures of interpersonal distress, mental health, emotional intelligence, and self-criticism were employed in this study to determine their interactions. Additionally, a measure based upon the work of Gottman,

Fainsilber-Katz, and Hooven (1997) was piloted for this study to explore the relationship between meta-emotional structures, emotional intelligence, and self-criticism.

Finally, much of the research cited in this literature review has used various statistical techniques such as correlation or regression that only allow the testing of effects between variables without considering a model as a whole. However, Blatt and colleagues (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) have explicated a complete theoretical model. In essence, exposure to anomalous parenting practices can lead to the development of a self-critical personality orientation, which in turn leaves an individual vulnerable to interpersonal distress and other mental health issues. Thus a complex statistical method referred to as structural equation modeling was utilized in this study in order to determine effects between individual variables, as well as a measure of overall model fit.

Two models were developed and tested. The first model referred to as the macro model tested the effects of general anomalous parenting practices, family expressiveness, self-criticism, aspects of emotional intelligence, general interpersonal distress, and mental health. A second model referred to as the micro model included the subscales of the parenting measure, the subscales of the interpersonal distress measure, the experimental meta-emotion measure and a number of background variables thought to affect Blatt's (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism.

Hypotheses

The following hypothesized models are pictorially shown in Figures 1 and 2 (see Appendix, p. 261-262).

1.) In the macro model, negative retrospective perceptions of parenting and familial expressiveness will lead to higher levels of self-criticism, a lack of attention to one's emotions, a lack of clarity of one's emotions, difficulty repairing one's negative emotions, and difficulty discerning others' emotions.

In the micro model, negative retrospective perceptions of parental control, parental warmth, parental abuse, and familial expressiveness will lead to higher levels of self-criticism, a lack of attention to one's emotions, a lack of clarity of one's emotions, difficulty repairing one's negative emotions, difficulty discerning others' emotions, more negative meta-emotional structures, and fewer positive meta-emotional structures.

2.) In the macro model, higher levels of self criticism will have a detrimental effect upon one's ability to access and utilize emotions, one's ability to repair negative emotions, and one's ability to discern others' emotions.

In the micro model, higher levels of self criticism will have a detrimental effect upon one's ability to access and utilize one's emotions, one's ability to repair negative emotions, one's ability to discern others' emotions. Self-criticism will also increase one's negative meta-emotional structures while decreasing one's positive meta-emotional structures.

3.) In the micro model only, paying attention to one's emotions, having clarity of one's emotions, the ability to repair one's negative emotions, and the ability to discern

others' emotions will also contribute to an increase in one's positive meta-emotional structures and a decrease in one's negative meta-emotional structures.

4.) In the macro and micro models, high levels of self-criticism will lead to interpersonal distress and other mental health issues and heightened negative moods. Conversely, paying attention to one's emotions, clarity of one's emotions, the ability to repair one's negative emotions, and the ability to discern others' emotions will tend to ameliorate interpersonal distress and other mental health issues and lead to a more positive current mood.

5.) The processes outlined in the first four hypotheses will be affected by other contextual variables such as participant gender in the macro model, or participant gender, parents' relationship status, socio-economic status, and ethnic background in the micro model. More specifically a female gender, parent's non-married marital status, lower socio-economic status, and a non-Caucasian background are expected to exacerbate negative processes outlined in the first four hypotheses. Because there is little research regarding these contextual variables in connection with the specific constructs of this research project, these contextual factors will be included into the model as endogenous variables, versus developing separate models for each contextual variable.

Method

The following method section begins with a description of the participants, the recruitment procedures, and the testing procedures of this study. This is followed with a description of the measures used in this study, their reliability, and other pertinent information. One measure was created and piloted for this study, the Meta-Emotional Experiences Survey (Myers, 2003). A description of its development and initial reliability analyses are provided. The method section concludes with a description of the data analysis techniques that were used in this study. Statistical analyses included descriptive, correlational, and structural equation analyses. Since structural equation modelling is a complex process and the prime thrust of the data analysis, some background is also provided regarding this statistical procedure.

Participants and Procedure

A total of 322 undergraduate, after-degree, and graduate students from the Faculty of Education and the Faculty of Business Administration at the University of Alberta (a large university in Western Canada) participated in this study. However, incomplete questionnaires reduced the working data set for the LISREL analysis to 297 participants. As shown in Table 1 (see Appendix, p.237), the majority of the participants were single (85.4 %), Caucasian (83.8 %), undergraduates (68.9 %), females (73 %), who had married parents (75.9 %). The average age of participants was 22.8 years old (SD = 5.17).

Participants were recruited by first asking instructors for permission to approach their students during class time. Then the study was fully explained to participants who were free to participate in all, part, or none of the study. They were also given the

opportunity to enter a draw for three cash prizes of 100, 50, and 25 dollars. Participants were asked to complete a consent form before completing a battery of questionnaires. There were no perceived risks within the study. Efforts were made to randomize the questionnaires within the battery, however it can be assumed that true randomization was not accomplished. In order to ensure confidentiality no overt identifying information such as name or student ID was collected, and only anonymous group data were analyzed for this study. Once participants were finished they were given a debriefing form, which included contact information for the primary investigator and his supervisor. Copies of the consent form, debriefing form, demographics form, and all measures are found in the appendix.

Measures

Measure of Parenting Style (MOPS; Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997). The MOPS is a 15-item self-report measure intended to assess retrospective perceptions of one's exposure to dysfunctional parental behaviors during the first 16 years of life. The MOPS measures 3 dimensions of parenting style labeled Indifference (indifference, coldness, distance and neglect versus closeness, empathy, emotional affection and warmth), Over-control (overprotection, control, intrusion, and infantilization versus the allowance of independence and autonomy), and Abuse (unpredictability, threats, and abuse). Respondents rate their level of agreement with each item using the following choices: "extremely true, moderately true, slightly true, not true." High scores indicate functional parenting, whereas low scores indicate dysfunctional parenting.

The MOPS is a refined measure of the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979), which is one of the most widely used measures of parenting style. The 25-item PBI has two dimensions labeled Care and Over-protection. The authors (Parker, Tupling, & Brown, 1979) found split-half reliability was 0.88 for the care scale and 0.74 for the over-protection scale ($N = 150$). Three-week test-retest reliability for 17 participants was 0.76 for the care scale and 0.63 for the over-protection scale. Two raters (Parker and Tupling) also provided independent scores of care and over-protectiveness based upon interviews with 65 participants about their relationship with parents growing up. Inter-rater reliability was 0.85 for the care dimension and 0.69 for the over-protection dimension. Correlations between PBI care scale sores and interview derived care scores ranged from 0.77 to 78. Correlations between the PBI over-protection scale score and the interview derived over-protection score ranged from 0.48 to 0.51. A subsequent study of 410 patients seeking general practitioners' services revealed similar results.

The MOPS was devised in order to dispel confusion generated by the PBI's use of both positively and negatively worded items (Gamsa, 1987). An abuse scale was added in response to criticisms that the PBI did not measure childhood abuse, which has been found to be highly correlated with adult psychopathology (Harris & Brown, 1996).

The authors (Parker et al., 1997) provided reliability and validity for the MOPS based upon the responses of 152 clinically diagnosed depressed patients seeking service at the Mood Disorders Unit of the Prince Henry Hospital in Australia. Alpha reliability coefficients were 0.93 and 0.93 for maternal and paternal indifference respectively, 0.82 and 0.76 for maternal and paternal over-control respectively, and 0.87 and 0.92 for

maternal and paternal abuse respectively. Although alpha reliabilities were not as high for this study, it should be noted that the samples were different (clinical versus student). Coefficient alpha reliabilities for the MOPS used in this study are provided in Table 2 (see Appendix, p.238), and a discussion is provided in the results section. Parker and colleagues (1997) also found the indifference scales were correlated 0.76 and 0.79 with their respective maternal / paternal PBI care scales. The over-control scales were correlated 0.73 and 0.71 with their respective maternal / paternal PBI overprotection scales. Scores on the abuse scale were associated with psychiatric assessment scores of abuse ($r = 0.40$ and $r = 0.66$ for maternal and paternal physical abuse respectively, $r = 0.51$ and $r = 0.62$ for maternal and paternal verbal abuse respectively, and $r = 0.39$ and $r = 0.65$ for mother and father making the child feel unsafe scores).

Bowlby (1977) and Blatt (1974) both predicted that anomalous parenting (indifference and over-control combined) could lead to psychopathology. The authors (Parker et al., 1997) found Mood Disorders Unit clinical diagnoses of neurotic / reactive (non-melancholic) depression versus psychotic / endogenous (melancholic) depression (Parker, Hadzi-Pavlovic, Wilhelm, Hickie, Brodaty, Boyce, Mitchell, & Eyers, 1994) was associated with higher scores on maternal indifference ($t = 2.86, p < 0.01$), maternal over-control ($t = 3.91, p < 0.001$), maternal abuse ($t = 2.32, p < 0.05$), paternal indifference ($t = 2.43, p < 0.05$), paternal over-control ($t = 2.53, p < 0.05$), and paternal abuse ($t = 1.8, p < 0.10$). The neurotic / reactive versus psychotic / endogenous distinction is similar to Blatt's (1974) introjective (self-critical) versus anaclitic (dependency) distinction.

The authors (Parker et al, 1997) also found a CIDI-A, Version 1.2 (World Health Organization, 1993) lifetime diagnoses of panic disorder versus no anxiety disorders were associated with higher scores on maternal over-control ($t = 2.28, p < 0.05$), paternal indifference ($t = 2.24, p < 0.05$), and paternal over-control ($t = 3.25, p < 0.01$), whereas a diagnosis of social phobia versus no anxiety was associated with higher scores on maternal over-control ($t = 2.08, p < 0.05$) and paternal over-control ($t = 2.18, p < 0.05$).

Family Expressiveness Questionnaire (FEQ; Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). The FEQ is a 24-item self-report measure intended to assess retrospective perceptions of positive and negative expressions (emotional, verbal, and non-verbal) within the family environment as one was growing up. Respondents rate the frequency that the items occurred on a scale from 1 (not at all frequently) to 9 (very frequently).

The FEQ used in this study was the shortened version of the original 40-item FEQ (Halberstadt, 1986). The original FEQ consisted of four subscales measuring two dimensions: positive affect / dominance (PD), positive affect / submissiveness (PS), negative affect / dominance (ND), and negative affect / submissiveness (NS). Alpha coefficient reliabilities for the original subscales were 0.88 for PS, 0.87 for PD, 0.75 for NS, and 0.88 for ND ($N = 52$ John Hopkins undergraduates). Ten day test-retest reliability was 0.91 for PS, 0.92 for PD, 0.89 for NS, and 0.91 for ND ($N = 32$). In two different samples Halberstadt (1986) found agreement between students' perceptions and the perceptions of their parents regarding the frequency of positive and negative expressions to be low ($r = 0.29$, $N = 33$ student-parent pairs, and $r = 0.24$, $N = 109$ student-parent pairs). Family expressiveness was moderately correlated with self-

expressiveness ($r = 0.35$) and shyness ($r = -0.49$) for 67 males and not significantly correlated for 62 females (Halberstadt, 1985).

Four samples were used to determine factor structure, reliabilities, and validity of the shortened version of the FEQ (Halberstadt et al, 1995). The first sample included 56 mothers, 43 fathers and their respective families including one kindergarten or first grade child. The second sample included 76 mothers, 65 fathers and their respective families including one infant involved in a longitudinal study of child temperament. The third sample included 143 mothers, 92 fathers and their respective families including one child in private school. The fourth sample included 224 mothers, 162 fathers and their respective families including one child in private school. Using factor analysis, Halberstadt and colleagues (1995) found two factors (positive and negative expressiveness) that accounted for 33 to 53 percent of the variance across the four samples. Halberstadt and colleagues (1995) retained the 12 items of each scale that had the highest consistent factor loadings across the first three samples. Coefficient alpha reliabilities ranged from 0.88 to 0.94 for positive expressiveness and from 0.82 to 0.92 for negative expressiveness across the four samples. Similar alpha reliabilities were found for the FEQ in this study and are reported in Table 2 (see Appendix, p.238). Eight-month test-retest reliabilities in the second sample ranged from 0.62 to 0.82 for positive expressiveness and 0.64 to 0.77 for negative expressiveness.

Halberstadt and colleagues (1995) posited that family expressiveness may affect and be affected by personality (extraversion, neuroticism), mental health (anxiety, depression, anger), and interpersonal relations (marital satisfaction, loneliness). Extraversion may be described as a sociable personality trait, whereas neuroticism may

be described as a personality trait that involves fluctuating, usually negative, emotions (Costa & McCrae, 1985). Neuroticism is commonly associated with anger, depression, and anxiety (Costa & McCrae, 1985). In Halberstadt and colleagues' (1995) second sample, mother's extraversion was correlated with positive expressiveness ($r = 0.27$ to $r = 0.33$) while neuroticism was correlated with negative expressiveness ($r = 0.49$ to $r = 0.58$). In their fourth sample, mother's negative expressiveness was correlated with trait anxiety ($r = 0.40$), depression ($r = 0.35$) anger expression ($r = 0.54$) and anger control ($r = -0.53$). In their first sample, mother's positive expressiveness was correlated 0.30 with marital satisfaction, and –0.52 with loneliness, whereas father's negative expressiveness was correlated –0.50 with marital satisfaction and 0.60 with loneliness.

McGill revision of the Depressive Experiences Questionnaire (MDEQ; Santor, Zuroff, & Fielding, 1997). The MDEQ is a 48-item self-report measure of two personality constructs, dependency and self-criticism, which predispose an individual to depression. Each scale of the MDEQ is composed of 30 items, and they share 12 common items that are oppositely scored. Respondents rate their level of agreement with each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The MDEQ is a revision of the original DEQ (Blatt, D'Afflitti, & Quinlan, 1976). The DEQ was revised in order to reduce the number of items, incorporate unit weighted scale scores versus factor derived scale scores, and to retain the psychometric properties of the original measure of the dependency and self-criticism scales only. Coefficient alpha reliabilities for the DEQ were greater than 0.75, whereas 12-month test-retest reliability was 0.79 for both dependency and self-criticism.

Santor and colleagues (Santor, Zuroff, & Fielding, 1997; Santor, Zuroff, Mongrain, & Fielding, 1997) provided reliability and validity for the MDEQ based upon four sample populations. The first sample included 779 female and 373 male psychology undergrads at the State University of New York-Binghamton, the second sample included 56 male and 27 female adult outpatients seeking treatment at the Day Hospital Unit of the Allan Memorial Hospital in Montreal, the third sample included 91 male and 81 female undergrads at McGill University, and the fourth sample included 310 male and 582 female undergrads at McGill University. Coefficient alpha reliabilities ranged from 0.64 to 0.78 for dependency and 0.69 to 0.76 for self-criticism across the first three samples. Similar alpha reliabilities were found for the MDEQ in this study and are reported in Table 2 (see Appendix, p.238). Santor, Zuroff, and Fielding (1997) found that their revised self-criticism and dependency scales were not significantly correlated with each other ($r = 0.03$ to $r = 0.17$) across the first three samples, indicating orthogonality. Both scales of the MDEQ were correlated 0.91 with their respective scales on the DEQ in their first sample.

Santor, Zuroff, Mongrain, and Fielding (1997) found MDEQ self-criticism was correlated ($r = 0.50$ to $r = 0.69$) with the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) in their second and third samples. The researchers found MDEQ self-criticism was correlated ($r = 0.55$ to $r = 0.58$) with the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977) in their fourth sample. The researchers also found correlations ranging from 0.70 to 0.76 between self-criticism and the neuroticism scale of the NEO Personality Inventory (NEO-PI; Costa & McCrae,

1985), and correlations ranging from –0.37 to –0.42 between self-criticism and the agreeableness scale of the NEO-PI.

Trait Meta-Mood Scale (TMMS: Salovey, Mayer, Goldman, Turvey, Palfai, 1995). The TMMS is a 30-item self-report measure intended to assess three aspects of self-perceived emotional intelligence. The TMMS consists of three subscales: attention to feelings (13 items), clarity of feelings (11 items), and mood repair (6 items). Respondents rate their level of agreement with each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The authors (Salovey et al, 1995) determined factor structures, reliabilities and validities using four samples of 200, 148, 86, and 78 undergraduates. Coefficient alpha reliabilities ranged from 0.78 to 0.86 for attention, 0.80 to 0.88 for clarity, and 0.62 to 0.82 for repair, across the first, third, and fourth samples. Similar alpha reliabilities were found for the TMMS in this study and are reported in Table 2 (see Appendix, p.238). Using confirmatory factor analysis Salovey and colleagues (1995) confirmed the existence of three factors and provided goodness of fit indices that exceeded 0.91. The clarity and attention scales were not significantly correlated across the first, third, and fourth samples. The repair scale was correlated with the Clarity scale ($r = 0.39$) in their first sample. The repair scale was correlated with the Attention and the Clarity scales ($r = 0.32$ and $r = 0.26$ respectively) in their third sample. The repair scale was not significantly correlated with either the Attention or the Clarity scales in their fourth sample.

Salovey and colleagues (1995) found that attention was correlated with private self-consciousness ($r = 0.42$), public self-consciousness ($r = 0.36$), neuroticism ($r = 0.22$),

and repressive defensiveness ($r = -0.22$). The researchers found that clarity was correlated with ambivalence over emotional expression ($r = -0.25$), depression ($r = -0.27$ and $r = -0.25$), neuroticism ($r = -0.40$), and vulnerability to distress ($r = -0.44$). Furthermore the researchers found that repair was correlated with depression ($r = -0.37$ and $r = -0.26$), optimism ($r = 0.57$), vulnerability to distress ($r = -0.44$), and negative mood regulation ($r = 0.53$).

Emotional Intelligence Scale – Revised (EIS-R; Austin, Saklofske, Huang, & McKenney, 2004). The EIS-R is a 33-item self-report scale intended to assess three aspects of self-perceived emotional intelligence. Respondents rate their level of agreement with each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Although the EIS-R includes three subscales (i.e., emotional regulation, optimism, and appraisal of others' emotions), only the seven-item appraisal of others' emotions subscale was utilized for this study. Salovey and Mayer's (1990) original conception of emotional intelligence involved four aspects, three of which are covered by the TMMS. A fourth, social, aspect of emotional intelligence is covered by the EIS-R, and is included in this study to provide additional depth and a full range of emotional intelligence factors as outlined by Salovey and Mayer (1990). .

The EIS-R is a revision of the original Emotional Intelligence Scale (EIS) developed by Schutte and colleagues (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). Schutte and colleagues (1998) developed the 33-item EIS based upon Salovey and Mayer's (1990) original conception of emotional intelligence. Although their factor analysis revealed only one factor, subsequent factor analyses revealed four factors (Gignac, Palmer, Manocha, & Stough, 2005; Hakanen, 2004;

Petrides & Furnham, 2000a; Saklofske, Austin, & Minski, 2003). Schutte and colleagues (1998) found coefficient alpha reliabilities ranged from 0.87 to 0.90 for the total scale, whereas two-week test-retest reliability was 078. The researchers also found that their measure of emotional intelligence was significantly correlated with the alexithymia (r = -0.65, N = 24), openness to experience (r = 0.54, N = 22), optimism (r = 0.52, N = 26), pessimism (r = -0.43, N = 26), depression (r = -0.37, N = 36), impulsivity (r = -0.39, N = 55), freshmen grade point average (r = 0.32, N = 63) and the three scales of the TMMS (r = 0.52 to r = 0.68, N = 47). Although Schutte and colleagues (1998) found that females scored higher on emotional intelligence than men (t = 3.39, p < 0.001, N = 327), other researchers (Petrides & Furnham, 2000b; Saklofske, Austin, & Minski, 2003) found no significant gender difference on the total emotional intelligence score. However, Petrides and Furnham (2000b) did find females scored higher that males on the social skills subscale of the EIS (t = 2.94, p < 0.01, N = 260), while Saklofske, Austin, and Minski (2003) found females scored higher than males on the social skills (t = 4.59, p < 0001, N = 351) and appraisal of emotions (t = 2.66, p < 0.01, N = 351) subscales of the EIS. Saklofske, Austin, and Minski (2003) also found appraisal of others' emotions was significantly correlated with alexithymia (r = -0.30), neuroticism (r = -0.14), extraversion (r = 0.19), openness to experience (r = 0.20), and conscientiousness (r = 0.26).

Austin, Saklofske, Huang, and McKenney (2004) criticized the EIS for lack of reverse-keyed items, and uncertain factor structure. Therefore the researchers reworded nine of the original EIS items in a negative direction. This left the appraisal of others' emotions scale of the EIS-R with four reverse-keyed items and three forward-keyed items. Coefficient alpha reliability for the appraisal of others' emotions scale was 0.71. A

similar alpha reliability was found for the emotional appraisal scale in this study and is reported in Table 2 (see Appendix, p.238). Austin, Saklofske, Huang, and McKenney (2004) also found significant correlations ranging from 0.13 to 0.61 (p's < 0.01) between the appraisal of others' emotions scale and all of the subscales of the short-form Bar-On Emotional Quotient Inventory (EQ-i: S, Bar-On, 2002), another emotional intelligence scale.

Meta-Emotional Experience Survey (MEES; Myers, 2003). The MEES is an experimental 24-item self-report measure intended to assess one's positive and negative meta-emotional structures related to emotional expression. The MEES was developed for this study through a complex process of "rational" and "empirical" derivation. Gottman, Fainsilber-Katz, and Hooven (1997) conducted a series of qualitative analyses of interviews regarding emotions and published their results in their book *Meta-Emotion: How Families Communicate Emotionally*. Twenty-five items were gleaned from the analyses of Gottman, Fainsilber-Katz, and Hooven (1997) and written to reflect a general emotion versus a specific emotion (e.g., "Sadness is trivial and unimportant," was re-written as "This emotion is trivial and unimportant"). Four additional items reflecting more positively oriented meta-emotional structures were also generated by the author of this dissertation. Feedback regarding face validity was provided by four graduate students, and inconsistently rated items were discarded. Twenty items were selected for use in this study – ten items reflecting negative meta-emotional structures and 10 items reflecting positive meta-emotional structures. Although, Gottman, Fainsilber-Katz, and Hooven (1997) originally studied only anger and sadness, evidence suggested that self-critics also experience constricted positive emotions (Mongrain & Zuroff, 1994). As

such, respondents answered each item three times over – once for the expression of anger, once for sadness, and again for happiness – for a total of 60 items. Respondents rated their level of agreement with each item on a 5-point Likert scale ranging from 1 (rarely) to 5 (often).

Internal reliability for the subscales of the originally derived MEES ranged from 0.36 for the happiness positive meta-emotions subscale to 0.77 for the sadness negative meta-emotions subscale. A factor analysis of all 60 items (three emotions by 20 items each) was conducted in order to determine whether the MEES contained a more internally stable factor structure. A principle components analysis with Varimax rotation of the original 60 items of the MEES revealed 19 factors with eigenvalues greater than one. However, examination of the scree plot suggested the existence of three factors, which accounted for 25.6% of the total variance explained. Several items displayed low loadings and /or loadings upon more than one factor. Three criteria were used to remove or retain items from the list: 1.) Items must have a minimum loading on one factor of 0.40; 2.) Items must discriminate loadings on other factors by at least 0.20; 3.) Items must be common to all three emotions of anger, sadness, and happiness. These criteria resulted in the retention of 24 of the total 60 original items of the MEES. As shown in Table 4 (see Appendix, p.242), a principle components analysis with Varimax rotation conducted on these remaining 24 items revealed six factors with Eigenvalues greater than one. However, examination of the scree plot again suggested the existence of three factors, which accounted for 41% of the variance explained.

Upon examination of the items, the first factor was labeled Negative Emotions – Negative Response (NENR). It accounted for 18% of the variance explained and was

composed of items numbered "6, 9, 11, 14, 18, 19" from the original MEES anger and sadness subscales. Participants who endorsed the items within this factor appeared to view anger and sadness as weak annoying emotions that they tried to hide or stifle. Upon examination of the items, the second factor was labeled All Emotions – Human Response (AEHR). It accounted for 12% of the variance explained and was composed of items numbered "5, 8" from the original MEES anger, sadness, and happiness subscales. Participants who endorsed the items within this factor appeared to view anger, sadness, and happiness as necessary human emotions that happened naturally. Upon examination of the items, the third factor was labeled Positive Emotions – Negative Response (PENR). It accounted for 12% of the variance explained and was composed of items numbered "6, 9, 11, 14, 18, 19" from the original MEES happiness subscale. Participants who endorsed the items within this factor appeared to view happiness as a weak annoying emotion that they tried to hide or stifle. A subsequent principle components analysis with oblique rotation revealed similar results and low correlations between factors (ranging from $r = -0.09$ to $r = 0.13$).

Item scores from each factor were summed to provide three new scales out of the original MEES, which were used for subsequent analyses. The 12-item NENR subscale revealed a mean of 36.4, a standard deviation of 9.58, and a coefficient alpha reliability of 0.84. The 6-item PENR subscale revealed a mean of 7.6, a standard deviation of 2.78, and a coefficient alpha reliability of 0.72. The 6-item AEHR subscale revealed a mean of 23.7, a standard deviation of 4.15, and a coefficient alpha reliability of 0.75.

Inventory of Interpersonal Problems – Revised (IIP-R; Kim & Pilkonis, 1999). The IIP-R is a 25-item self-report measure intended to assess distress associated with

interpersonal problems. The IIP-R is subdivided into 5 subscales measuring interpersonal sensitivity (IS), interpersonal ambivalence (IA), aggression / hostility (AH), need for social approval (NA), and lack of sociability (LS). The entire scale can also be summed to reflect overall interpersonal distress. Respondents rate their level of distress associated with each item on a 5-point Likert scale ranging from 0 (not at all distressing) to 4 (extremely distressing).

The IIP-R is a shortened version of the original 127-item IIP (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). The IIP reflected the most common client complaints expressed during psychological intake interviews. These complaints are divided into two different forms: things the respondent does too much of (e.g. try to be responsible, try to control others), and things the respondent finds hard to do (e.g., be submissive, be assertive, be sociable).

Kim and Pilkonis (1999) used six patient samples from five different sites for a total of 1149 respondents to determine reliability and validity for the IIP-R. Using item response theory analysis, the authors found that each subscale of the IIP-R, in particular IS, IA, and AH, provided differential sensitivity to increasing levels of clinically diagnosed personality disorders and interpersonal distress in 178 patients. In contrast to other measures of psychopathology, which reflect "floor effects," the increased sensitivity of the IIP-R is useful in measuring interpersonal distress that may reflect low grade or subsyndromal levels of psychopathology (Dykman, 1998; Gotlib, Lewinsohn, & Seeley, 1995; Horowitz, et al, 1988; Wells, Burnam, Rogers, Hays, & Camp, 1992).

Kim and Pilkonis (1999) found coefficient alpha reliabilities were 0.80 for the IS scale, 0.82 for the IA scale, 0.85 for the AH scale, 0.84 for the NA scale, and 0.88 for the

LS scale. Similar alpha reliabilities were found for the IIP-R in this study and are reported in Table 2 (see Appendix, p.238). Kim and Pilkonis (1999) also found that the original IIP was highly correlated with the IS ($r = 0.92$), IA ($r = 0.92$), AH ($r = 0.97$), NA ($r = 0.95$), and LS ($r = 0.95$) subscales of the IIP-R.

Duke Health Profile (DUKE; Parkerson, Broadhead, & Tse, 1990, 1996). The DUKE is a 17-item self-report measure intended to assess the three major World Health Organization dimensions of physical, mental, and social health. The DUKE is a revision of the original 63-item Duke-UNC Health Profile (DUHP; Parkerson, Gehlbach, & Wagner, 1981). Although it had sound reliability and validity, the DUHP was criticized for being too lengthy, and for difficulties in scoring and interpretation. For this study, only the 5 mental health items reflecting symptoms of depression, anxiety, and self-esteem were used. Respondents choose from one of three responses, "none, some, a lot," for two items beginning with the statement "during the past week how much trouble have you had with …" for each of the following symptoms, "nervousness, feeling depressed or sad." Respondents choose from one of three responses, "yes describes me exactly, somewhat describes me, no doesn't describe me at all," for three items beginning with the statement "how well does the following statement describe you …" for each of the following symptoms, "I give up too easily, I have difficulty concentrating, I like who I am." Answers are summed to give a total, but brief, mental health score.

Parkerson, Broadhead, and Tse's 1990 sample included 683 patients seeking services from the Duke University Medical Center in North Carolina, whereas their 1996 sample included 413 patients seeking services from the Caswell Family Medical Center in North Carolina. One to eight-week test-retest reliability for the mental health scale was

0.70 ($N = 55$). Coefficient alpha reliability for the mental health scale ranged from 0.68 to 0.70 across the two samples. Although the alpha reliability was not as high for this study, it should be noted that the samples were different (clinical versus student). Coefficient alpha reliability for the mental health scale used in this study is provided in Table 2 (see Appendix, p.238), and a discussion is provided in the results section. Parkerson, Broadhead, and Tse (1990, 1996) also found the mental health scales of the DUKE and DUHP had a correlation of 0.70. The DUKE mental health scale was also correlated with a number of other scales: the Zung Self-Rating Depression Scale ($r = 0.70$, $N = 111$; Zung, 1965), the CES-D ($r = 0.65$, $N = 413$; Radloff, 1977), the State Anxiety Inventory ($r = 0.67$, $N = 413$; Spielberger, 1983), the emotional behavior scale of the Sickness Impact Profile ($r = -0.48$, $N = 103$; Gilson, Gilson, Berner, 1975), and the personal self-esteem scale of the Tennessee Self-Concept Scale ($r = 0.67$, $N = 101$; Fitts, 1972).

Demographics. Demographic data was also collected regarding participants' sex, age, ethnic background, education level, relationship status, and parent's relationship status. Participants' sex was coded as "1" equals female and "2" equals male. Ethnic status was recoded as "1" equals Caucasian and "2" equals non-Caucasian for data analyses. Parents' relationship status was recoded as "1" equals married (or common-law) and "2" equals non-married" (i.e., separated, divorced, single, remarried, or widowed) for data analyses. Participants were also asked to respond to two eight-point items based upon a semantic differential scale (Mehrabian & Russell, 1974; Osgood, Suci, & Tannenbaum, 1957). The first item asked about "income level of family when growing up" anchored on either side by "poor" and "rich". The second item asked about "current mood" anchored on either side by "sad" and "happy." Although other

researchers (Russell & Mehrabian, 1977; Watson & Tellegen, 1984) have determined that negative and positive affect are separate dimensions that can be orthogonal, in this study current mood was measured on a continuum for the sake of brevity.

Data Analysis

Throughout this review the terms self-criticism (a construct) and self-critics (individuals) have been used somewhat interchangeably. However, Blatt and Shichman (1983) note that there are varying degrees of severity of self-criticism. Furthermore the measures used for this study were designed to measure their respective constructs on a continuum. Coyne and Whiffen (1995) argue that traditional ways of determining group status (e.g., self-critic versus non-critic) is arbitrary and that information is lost in the process of forming groups. In response to these criticisms by Coyne and Whiffen (1995), all variables in this study were treated as continuous variables (and group status was not arbitrarily determined).

The first phase of analysis involved descriptive analyses of all variables including means, standard deviations, internal reliability coefficients, or frequencies. As noted, the originally derived MEES was subjected to a factor analysis in order to determine a more consistent structure. The second phase of analysis involved a correlational analysis of all the data to determine associations between variables. The standard version of SPSS 10.0 was utilized to determine the first two phases of data analysis.

Although there may be significant correlations among variables, pathways of association between variables may be mediated by the effect of other variables. Therefore, the final and primary phase of analysis involved structural equation analyses

using the LISREL 8.72 program (Jöreskog & Sörbom, 2005) and the maximum likelihood method of estimation. Structural equation modeling involves developing a hypothetical model about the workings of the observed or "real" world. Based on these hypotheses, a mathematical formula is then developed to describe the relationship between a number of latent variables that coexist within this hypothetical model. Finally the hypothetical model is mathematically tested against real world data in order to see how well the two match (Ullman, 1996).

Structural Equation Modeling

Hayduk (1987) states that a researcher's theoretical model implies "unavoidable" mathematical consequences. One "unavoidable" mathematical consequence is that each variable will covary with every other variable to some degree or another. These relationships can be mathematically specified as a series of covariances, or a covariance matrix. LISREL allows one to test the goodness of fit between the implied covariance matrix of the hypothetical model and the actual covariance matrix found in the researcher's collected data set. The closer the researcher's implied covariance matrix fits the data covariance matrix, the more accurately his/her model has described the workings of the real world.

Another "unavoidable" mathematical consequence is the implication of causality. The constraints that the researcher places upon a model's latent variables imply the presence, or lack thereof, of a relationship (i.e., covariance). The researcher's constraints also imply the direction of that relationship (i.e., causality). Each unique model with its unique constraints implies a unique covariance matrix. Change the constraints, namely

change the relationship or direction between two variables, and you change the implied covariance matrix. Although Hayduk (1987) points out that there is no true causality within a structural equation model, the causality implied by our model constraints "constitute a general and parsimonious way for our brains to grasp and summarize data" in a causal fashion (p.xv). Shipley (2002) suggests that although correlation does not imply causation, causation does imply correlation. He goes on to suggest that underlying causal processes will impose a certain order or structure on the variables that we measure. Therefore, argues Shipley (2002), by studying the pattern of variances and covariances between variables using structural equation modeling, a researcher can obtain at least a partial picture of the underlying causal processes.

Kline (2005, p. 315; see also Hayduk, 1987) points to the fact that "models just as complex as the data test no particular hypothesis." That is to say that a model where every variable is allowed to be associated with every other variable gives no indication of direct or indirect effects, and the direction of those effects. Although researchers are generally interested in effects, one of the strengths of structural equation modeling is to denote where there are no effects – where researchers intentionally constrain effect sizes to zero (Hayduk, 1987; Kline, 2005).

Another strength of structural equation modeling is that not only are individual effects tested, but the overall model is tested as well. To mathematically determine how well the implications of a researcher's model describe real world processes, a measure of model fit (a fit index) is used within structural equation modeling. Typically the chi-square (χ^2) goodness of fit index is used to determine whether the model matrix is similar or dissimilar to the matrix formed by the sample data. A non-significant ($p > .05$) χ^2

indicates that the hypothetical model and the observed data are similar. Although the χ^2 statistic is the most commonly reported fit index, it is sensitive to sample size (Bollen, 1986). As sample size increases, so do the degrees of freedom, which increase the power of the χ^2 statistic to detect minor misspecifications in the model. This increased stringency may result in rejection of the hypothetical model – a Type II error (Hu & Bentler, 1999). In response to criticisms of the χ^2 statistic, a number of other fit indexes have been developed. Unfortunately, researchers are undecided as to which fit indices are the most versatile (Fan, Thompson, & Wang, 1999; Hayduk, 1987; Hu & Bentler, 1999; Tanaka, 1993).

Hayduk (1987), Kline (2005), and Boomsma (2000) recommend reporting the χ^2 fit statistic. Schreiber, Stage, King, Amaury, and Barlow (2006), Boomsma (2000), Kline (2005) and Hu and Bentler (1999) all recommend using the Root Mean Squared Error of Approximation (RMSEA; Steiger, 1990; Steiger & Lind, 1980) fit statistic. Boomsma (2000), Kline (2005), and Hu and Bentler (1999) recommend utilizing the Standardized Root Mean Squared Residual (SRMR; Bentler, 1995; Jöreskog & Sörbom, 1981). Boomsma (2000) notes that the χ^2 statistic may be too large to indicate model fit, and yet the residuals, as indicated by SRMR, may be very small, indicating model fit. In addition to χ^2, SRMR, and RMSEA, the Non-Normed Fit Index or Tucker-Lewis Index (NNFI; Bentler & Bonnett, 1980; Tucker & Lewis, 1973), and Goodness of Fit Index (GFI; Bentler, 1983; Jöreskog & Sörbom, 1984; Tanaka & Huba, 1985) indices are also utilized to determine model fit for this study. The NNFI conforms to Tanaka's (1993) recommendations that fit indices be sample based and penalize complex models. The NNFI and RMSEA conform to Fan, Thompson, and Wang's (1999) recommendations

that fit indices be estimation method-free, sample size-independent, un-biased, and minimally variable. The GFI conforms to Tanaka's (1993) recommendations that fit indices be absolute versus relative, estimation method-specific and sample size-dependent. The GFI and RMSEA conform to Fan, Thompson, and Wang's (1999) recommendations that fit indices be sensitive to model misspecification The SRMR, RMSEA, GFI, and NNFI all utilize a standardized metric as recommended by Tanaka (1993).

In addition to their recommendation that at least two fit indices be used, this study also utilized Hu and Bentler's (1999) cut off values for RMSEA (0.08), SRMR (0.06), and NNFI (0.95) to determine good model fit while minimizing Type I errors (rejecting the null hypothesis when it is actually true, and there is no effect in the real world) and Type II errors (accepting the null hypothesis when it is actually false, and there is an actual effect in the real world). A cut off value of 0.95 was utilized for GFI, and the standard cut off "p" value of 0.05 was utilized for the χ^2 fit statistic.

Structural equation analysis is based upon the assumption of multivariate normality. Violations of multivariate normality may lead to misspecification of the effects (parameter estimates) and overall model fit (Hayduk, 1987; Lei & Lomax, 2005). However, Lei and Lomax (2005) suggest that multivariate normality is very difficult to achieve in real world studies and therefore it is important to study the robustness of structural equation modeling under varying conditions of non-normality. This robustness refers to the degree that the assumptions of multivariate normality can be violated without having large effects upon parameter estimates or overall fit. This robustness would increase a researcher's confidence in his / her findings. As such, a number of researchers

(Fan, Thompson, & Wang, 1999; Hayduk, 1987; Hu & Bentler, 1999; Kline, 2005; Lei & Lomax, 2005) have found the maximum likelihood method of estimation (MLE) to be relatively robust in dealing with violations of multivariate normality – often more so than other methods of estimation. Lei and Lomax (2005, p.15) concluded that "in general the biases of parameter estimates were less than 10%" under differing conditions of non-normality, sample size, and estimation method. For example, using a sample size of 250, estimating 19 parameters under the most extreme patterns of skewness and kurtosis, Lei and Lomax (2005) found a mean parameter bias of 2.12% using the maximum likelihood method of estimation and a mean parameter bias of 1.71% using the generalized least squares method of estimation. These bias figures are obtained in comparison to similar, but normal samples (i.e., no skew or kurtosis). These bias figures suggest that models would not be greatly affected by violations of normality. Lei and Lomax (2005) also note that NNFI was relatively unaffected by violations of normality, whereas, chi-square was less so.

In order to quell any remaining criticisms of the maximum likelihood method of estimation, Hayduk (1987, p.334) recommends "novice LISREL users rerun their 'final' model with the two or three estimation strategies most common to the appropriate literature." In particular, he recommends using the generalized least squares method of estimation (GLS) as a rerun strategy, because it does not assume multivariate normality and it is often used when there are violations of multivariate normality (Hayduk, 1987; Kenny & Judd, 1984). Therefore, once the final models of this study have been determined using the MLE method, they will be compared to the GLS method. Any large discrepancies between the two methods would be issues for further investigation.

Among other things, LISREL output provides an indication of overall model fit, an indication of significant pathways of association between latent variables, and diagnostic analyses. These diagnostic analyses or modification indices are used to "improve fit (especially in exploratory work) and to test hypotheses (in theoretical work)" (Ullman, 1996, p. 752; see also Hayduk, 1987; Jöreskog, & Sörbom, 1996; Kline, 2005). Although researchers are often interested in proving one variable has an effect on another, one of the strengths of LISREL is to model the lack of effects between variables (a pathway between two variables that is constrained to zero) in a complex model. The LISREL modification indices estimate how much the chi square statistic would improve if a constraint were removed and two variables were free to affect each other (Jöreskog, & Sörbom, 1996; Kline, 2005). There are numerous precedents in the literature that utilize modification indices to improve model fit (e.g., Beckie & Hayduk, 2004; Enns, Cox, & Clara, 2002; Hammen, Shih, & Brennan, 2004; Ullman, 1996). However, Hayduk (1987, p.177) warns against using modification indices "merely to take advantage of a particularly large partial derivative or modification index." As such, modifications to a model should be theory driven in addition to what the modification indices indicate (Hayduk, 1987; Hayduk, 1990; Jöreskog, & Sörbom, 1996; Kline, 2005).

Debate exists regarding the utility of first modeling a measurement model before testing a structural model (Andersen & Gerbing, 1988; Fornell & Yi, 1992; Hayduk & Glaser, 2000; Mulaik & Millsap, 2000). Furthermore, the literature is replete with peer-reviewed published examples of reporting both measurement and structural models (e.g., Dunkley & Blankstein, 2000; Enns, Cox, & Clara, 2002; Wei, Vogel, Ku, & Zakalik, 2005), and structural models alone (e.g., Eisenberg, Valiente, Sheffield-Morris, Fabes,

Cumberland, Reiser, Thompson-Gershoff, Shepard, & Losoya, 2003; Flett, Besser, & Hewitt, 2005; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Hammen, Shih, & Brennan, 2004; Sturman, & Mongrain, 2005; Zuroff & Duncan, 1999). Since the theory and supporting literature for this study are quite sound, a decision was made to test only the structural model and utilize the modification indices to make minor modifications to the model.

As noted, two hypothetical models were developed – a macro model and a micro model. The original macro model (see Figure 1) included five latent exogenous (ksi or ξ) variables, namely gender, mother's dysfunctional parenting, father's dysfunctional parenting, negative family expressions, and positive family expressions. Participant's self-reported gender (female or male), the total scale scores of the mother's and father's parenting scales of the MOPS (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997), and the positive and negative expressiveness scales of the FEQ (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995) respectively were utilized as indicators of the latent exogenous (ksi or ξ) variables. The original macro model included six latent endogenous (eta or η) variables, namely self-criticism, one's emotional clarity, paying attention to one's emotions, the ability to repair one's negative emotions, the ability to discern others' emotions, interpersonal problems, and mental health problems. The self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997), the attention, clarity, and repair scales of the TMMS (Salovey, Mayer, Goldman, Turvey, Palfai, 1995), the appraisal of emotions scale of the EIQ-R(Austin, Saklofske, Huang, & McKenney, 2004), total interpersonal problems scale score of the IIP-R (Kim & Pilkonis, 1999), and the mental health scale of the DUKE (Parkerson, Broadhead, & Tse, 1990) respectively

were utilized as indicators of the latent endogenous (eta or η) variables.

Modifications to the macro model were utilized to inform the construction of the original micro model. The original micro model included ten latent exogenous (ksi or ξ) variables, namely sex, parent's marital status, ethnic background, family income, mother's indifference, mother's tendency to be over-controlling, mother's abusiveness, father's indifference, father's tendency to be over-controlling, and father's abusiveness. Participant's self-reported sex (female or male), participant's self-reported ethnic background (Caucasian or non-Caucasian), the participant's self-reported marital status of their parents (married or not married), the participant's self-reported rating of their family economic status while growing up, and mother's and father's indifference, over-control and abuse subscales of the MOPS (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997) respectively were utilized as indicators of the latent exogenous (ksi or ξ) variables. The original micro model included seventeen latent endogenous (eta or η) variables, namely negative family expressions, positive family expressions, self-criticism, one's emotional clarity, paying attention to one's emotions, the ability to repair one's negative emotions, the ability to discern others' emotions, negative meta-emotional responses to negative emotions, negative meta-emotional responses to positive emotions, meta-emotional responses that view emotions as human responses, interpersonal sensitivity, interpersonal ambivalence, interpersonal aggressiveness, need for social approval, lack of sociability, mental health problems, and current mood. The positive and negative expressiveness scales of the FEQ (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997), the attention, clarity, and repair scales of the TMMS (Salovey, Mayer, Goldman, Turvey,

Palfai, 1995), the appraisal of emotions scale of the EIQ-R (Austin, Saklofske, Huang, & McKenney, 2004), the NENR, PENR, and AEHR scales of the revised MEES (Myers, 2003), the interpersonal sensitivity, interpersonal ambivalence, aggression / hostility, need for social approval, and lack of sociability sub-scales of the IIP-R (Kim & Pilkonis, 1999), the mental health scale of the DUKE (Parkerson, Broadhead, & Tse, 1990) and self-reported mood respectively were utilized as indicators of the latent endogenous (eta or η) variables.

Latent variables were scaled to the same metric as their respective indicator variables. Five percent of the indicator variances were used as values for indicator error variances (theta delta or θ_δ and theta epsilon or θ_ϵ) in order to account for participant errors and biases or researcher errors committed entering data into the database. Latent error variances (phi or φ and psi or ψ) were left free to vary. These latent errors may be indicative of the effects of other factors not accounted for in the hypothesized model. The coefficients between latent variables (gamma or γ and beta or β) where effects were hypothesized to exist were also left free to vary in order to find the best fitting model within the specified constraints where effects were hypothesized not to exist. The sample covariance matrix was obtained using the standard version of SPSS 10.0 and entered directly into the LISREL input syntax file.

The two aforementioned models were turned into mathematical equations and tested against the data collected using the LISREL 8.72 program (Jöreskog & Sörbom, 2005) and the maximum likelihood method of estimation. LISREL was utilized to test the individual hypotheses (i.e., anomalous parenting and negative familial emotional expressiveness will be associated with higher levels of self-criticism, lower levels of self-

perceived emotional intelligence, higher levels of negative meta-emotional structures; in turn these will be associated with interpersonal distress and other mental health issues). As noted modification indices were used to improve model fit within theoretical reason.

Results

The following results section begins with a summary of the descriptive analyses of the data. Concerns regarding some "middling and mediocre" reliability coefficients and some non-normal distributions are addressed. This is followed with a brief summary of the correlational analyses. The results section concludes with a summary of the structural equation analyses of the two models hypothesized in this study. Statistical analyses were generally in keeping with previous research and with the hypotheses of this study. More detailed descriptions of the statistical analyses are provided in the appendix. Furthermore, for ease of interpretation, diagrams of the hypothesized structural models and the final structural models are also provided in the appendix.

Descriptive Analyses

Frequencies, means, standard deviations and alpha coefficient reliabilities are displayed in Tables 1 and 2 (see Appendix, p.237-238). Many of the scales showed good internal consistency. George and Mallery (2001) suggested the following descriptions of adequacy for sample reliability: measures of 0.99 to 0.90 are marvelous, 0.89 to 0.80 are meritorious, 0.79 to 0.70 are middling, 0.69 to 0.60 are mediocre, and 0.59 to 0.50 are miserable. Below 0.50 are unacceptable because measurement error has a greater likely effect on the measured score than the true score does (George & Mallery, 2001). Some of the scales suffered from middling to mediocre reliability; however this may be a reflection of scale length. The Spearman Brown Prophecy Test may provide information regarding potential reliabilities corresponding to hypothesized scales containing additional items.

The Spearman Brown Prophecy Test is notated as: $R_n = (N \times R) / (1 + [N-1] \times R)$, where R_n is the new reliability, R is the old reliability, and N is the amount one wants to increase / decrease the number of items by. For example increasing the number of items on the MOPS over-control subscale from four items to ten would entail an N of 2.5.

Utilizing Spearman's Prophecy test the reliability of the MOPS four-item mother's over-control subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997) can be estimated to be 0.84 if it were expanded to be a similar ten-item subscale. The reliability of the MOPS five-item mother's abusiveness subscale can be estimated to be 0.81 if it were expanded to be a similar ten-item subscale. The reliability of the MOPS four-item father's over-control subscale can be estimated to be 0.80 if it were expanded to be a similar ten-item subscale. The reliability of the IIP five-item interpersonal sensitivity subscale (Kim & Pilkonis, 1999) can be estimated to be 0.86 if it were expanded to be a similar ten-item subscale. The reliability of the five-item DUKE mental health scale (Parkerson, Broadhead, & Tse, 1990) can be estimated to be 0.78 if it were expanded to be a similar ten-item scale. The reliability of the experimental 6-item PENR scale (Myers, 2003) can be estimated to be 0.81 if it were expanded to be a similar ten-item scale. The reliability of the experimental 6-item AEHR (Myers, 2003) scale can be estimated to be 0.83 if it were expanded to a similar ten-item scale.

"Many instances of multivariate non-normality are detectable through inspections of univariate normality" (Kline, 2005, p. 49). Inspection of skew and kurtosis as outlined in Table 3 (see Appendix, p.240), suggests that most of the variables measured in this study do not follow a normal distribution. However, inspection of SPSS 10.0 histogram outputs suggests otherwise. Most of the variables were relatively normally distributed.

However, the parenting variables are somewhat negatively skewed. Conversely, age, parent's relationship status, education, ethnicity, and negative meta-emotional responses to positive emotions are somewhat positively skewed. These skewed distributions were not unexpected considering the characteristics of a primarily undergraduate university student sample. As noted earlier, a number of researchers (Fan, Thompson, & Wang, 1999; Hayduk, 1987; Hu & Bentler, 1999; Kline, 2005; Lei & Lomax, 2005) have found the maximum likelihood method of estimation to be relatively robust despite violations of normality, and therefore it was decided to continue with the analyses without transforming the data. An additional benefit to leaving data untransformed is that we can then talk about the effects of real-world variables versus transformed variables not found in the real world.

Correlational Analyses

Correlations were generally as expected and are displayed in Table 5 (see Appendix, p.243). Functional parenting (warm, autonomy granting, non-threatening) was significantly correlated with positive expressions (emotional, verbal, and non-verbal) within the family environment as one was growing up, and the ability to repair one's negative emotions. Dysfunctional parenting (cold, indifferent, controlling, abusive) on the other hand, was significantly correlated with self-criticism, negative expressions (emotional, verbal, and non-verbal) within the family environment as one was growing up, negative meta-emotional responses to positive emotions, and interpersonal distress and other mental health issues. Self-criticism was significantly correlated with negative meta-emotional responses to negative and positive emotions, a meta-emotional view of

emotions as human responses, interpersonal distress and other mental health issues, and inversely and significantly correlated with aspects of self-perceived emotional intelligence (attention to emotions, clarity of emotions, ability to repair emotions, ability to discern others' emotions). Dependency was significantly correlated with interpersonal distress and other mental health issues, and a pattern of paying attention to one's emotions but lacking clarity of those emotions. Three aspects of self-perceived emotional intelligence (clarity of emotions, ability to repair emotions, ability to discern others' emotions) were inversely and significantly correlated with interpersonal distress and other mental health issues.

Structural Equation Analyses

Although there were many significant correlations among the variables, pathways of association between variables may be mediated by other variables. Furthermore, individual pathways between variables may become non-significant when considered within the context of a larger system. Therefore to discern system characteristics two hypothetical models were developed – a macro model and a micro model. These models were then turned into mathematical equations and tested against the data collected using the LISREL 8.72 program.

The first macro model (see Figure 1 in Appendix, p.261) initially proved to be ill fitting ($\chi^2 = 54.695, p < 0.000, df = 15$; $RMSEA = 0.0941$; $SRMR = 0.0455$; $GFI = 0.970$; $NNFI = 0.905$) according to the criteria specified by Hu and Bentler (1999). As noted earlier, when initial models fail, modification indices can be used to improve model fit (Ullman, 1996; Hayduk, 1987; Jöreskog & Sörbom, 1996; Kline, 2005). Analysis of

model and the modification indices suggested four major changes to the original model that remained within the theoretical boundaries of the hypotheses. The first modification involved taking the exogenous variables of positive and negative expressiveness (emotional, verbal, and non-verbal) within the family of origin and moving them into the midst of the model as endogenous variables. The second modification involved creating a pathway between measurement error variances (theta epsilon or θ_ϵ) of the observed MDEQ self-criticism scale (Santor, Zuroff, & Fielding, 1997) and the total IIP-R scale (Kim & Pilkonis, 1999). The third modification involved the removal of pathways (gamma or γ) between positive and negative expressiveness within the family of origin and the emotional clarity latent variables. The final modification involved creating a pathway (beta or β) from clarity of one's emotions to paying attention to one's emotions. These modifications resulted in a model that fit as shown in Figure 3 (see Appendix, p.263). The chi-square statistic was non-significant ($\chi^2 = 36.441$, $p = 0.106$, $df = 27$) suggesting that the hypothesized model and the underlying characteristics of the real world student sample were somewhat similar. Other fit indices indicated adequate model fit and were within pre-specified cut-off values: Root mean squared error of approximation (RMSEA) was 0.0338; Standardized root mean residual (SRMR) was 0.0331; The goodness of fit index (GFI) was 0.980; And the non-normed fit index (NNFI) was 0.987.

The following synopsis of the maximum likelihood estimates of latent coefficients and latent error are also displayed in Tables 6 through 8 (see Appendix, p.248-250). Mother's and father's dysfunctional parenting (cold, indifferent, controlling, abusive) predicted negative expressiveness (emotional, verbal, and non-verbal) within the family

of origin, whereas mother's and father's functional parenting (warm, autonomy granting, non-threatening) predicted positive expressiveness (emotional, verbal, and non-verbal) within the family of origin. Negative expressiveness within the family of origin predicted self-criticism and paying attention to one's emotions. On the other hand, positive expressiveness within the family of origin predicted paying attention to one's emotions and the ability to repair one's negative emotions. Self-criticism inversely predicted having clarity of one's emotions and the ability to repair one's negative emotions, whereas self-criticism predicted interpersonal distress and other mental health issues. Having clarity of one's emotions predicted paying attention to one's emotions, the ability to repair one's negative emotions and the ability to discern others' emotions. Paying attention to one's emotions predicted the ability to discern others' emotions. The ability to repair one's negative emotions inversely predicted mental health problems. The ability to discern others' emotions inversely predicted interpersonal distress.

Participant female gender predicted positive expressiveness (emotional, verbal, and non-verbal) within the family of origin and paying attention to one's emotions, whereas participant male gender predicted self-criticism and having clarity of one's emotions. Mother's parenting style shared latent exogenous error (phi or ϕ) with father's parenting style. The maximum likelihood estimate of shared measurement error (theta epsilon or θ_ϵ) was -61.373 ($p < 0.05$) between the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997) and the total IIP-R scale (Kim & Pilkonis, 1999).

As noted, a generalized least squares method of estimation was also utilized in order to address violations of multivariate normality (Hayduk, 1987). The chi-square statistic was non-significant ($\chi^2 = 32.972$, $p = 0.204$, $df = 27$) suggesting that the

hypothesized model and the underlying characteristics of the real world student sample were somewhat similar. Other fit indices indicated adequate model fit and most were within pre-specified cut-off values (*RMSEA* < 0.01; *SRMR* = 0.0393; *GFI* = 0.981; *NNFI* = 0.946). These results are similar to those of the maximum likelihood method of estimation reported in this study. Hence, the previous model interpretations apply to both statistical outcomes.

The first micro model (see Figure 2 in Appendix, p.262) also initially proved to be ill fitting ($\chi^2 = 317.121, p < 0.000, df = 168$; *RMSEA* = 0.0506; *SRMR* = 0.0630; *GFI* = 0.931; *NNFI* = 0.946) according to the criteria specified by Hu and Bentler (1999). As noted earlier, when initial models fail, modification indices can be used to improve model fit (Ullman, 1996; Hayduk, 1987; Jöreskog, & Sörbom, 1996; Kline, 2005). Analysis of model and the modification indices suggested four major changes to the original model that remained within the theoretical boundaries of the hypotheses. The first modification involved taking the exogenous parenting variables and moving them into the midst of the model as endogenous variables. This left participant gender, parent's marital status, participant ethnic background, and family income when growing up as the remaining exogenous variables. The second modification involved creating a pathway between measurement error variances (theta epsilon or θ_ϵ) of the observed TMMS emotional clarity scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995) and the MEES AEHR scale (Myers, 2003). The third modification involved creating a pathway between measurement error variances (theta epsilon or θ_ϵ) of the observed FEQ negative expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995) and the IIP-R aggression / hostility scale (Kim & Pilkonis, 1999). The fourth modification involved

reversing the direction of theorized effect between two latent variables. Instead of the effect going from paying attention to one's emotions to the meta-emotional view that emotions are human responses, the effect was reversed such that the effect went from the meta-emotional view that emotions are human responses to paying attention to one's emotions. These modifications resulted in a model that fit as shown in Figures 4 and 5 (see Appendix, p.264-265). Most fit indices indicated adequate model fit and were within pre-specified cut-off values: RMSEA was 0.0268; SRMR was 0.0310; GFI was 0.959; and NNFI was 0.985. Although the chi-square statistic was significant ($\chi^2 = 177.337$, $p = 0.0237$, $df = 142$), the results suggest a trend that indicates that the hypothesized model and the underlying characteristics of the real world student sample were somewhat similar. The modification indices indicated a fifth modification that would provide a non-significant chi-square, however this modification did not make theoretical sense (Hayduk, 1987; Hayduk, 1990; Kline, 2005).

The following synopsis of the maximum likelihood estimates of latent coefficients and latent error are also displayed in Tables 9 through 11 (see Appendix, p.251-260). Mother's over-controlling and abusive parenting styles predicted negative expressiveness (emotional, verbal, and non-verbal) within the family of origin. There was a trend for father's abusive parenting style to predict negative family expressions as well. Mother's indifferent parenting style on the other hand, inversely predicted positive expressiveness (emotional, verbal, and non-verbal) within the family of origin. Negative expressiveness within the family of origin predicted self-criticism. Conversely, positive expressiveness within the family of origin predicted paying attention to one's emotions, the ability to repair negative emotions, and a meta-emotional view of emotions as human responses.

(Although negative family expressiveness affected paying attention to one's emotions in the macro model, it is presumed that the shared effect of an increased number of variables into the micro model led to the non-significant effect between negative family expressiveness and paying attention to one's emotions in the micro model.) Self-criticism inversely predicted having clarity of one's emotions, paying attention to one's emotions, and the ability to repair one's negative emotions. Additionally, self-criticism predicted negative meta-emotional responses to negative and positive emotions, a meta-emotional view of emotions as human responses, interpersonal sensitivity, interpersonal ambivalence, interpersonal aggression / hostility, a need for social approval, a lack of sociability, mental health problems , and a "sad" mood. Having clarity of one's emotions predicted the ability to repair one's negative emotions, the ability to discern others' emotions, and a meta-emotional view of emotions as human responses, whereas having clarity of one's emotions inversely predicted negative meta-emotional responses to negative emotions. Paying attention to one's emotions predicted the ability to discern others' emotions, interpersonal sensitivity, and a "sad" mood, whereas, paying attention to one's emotions inversely predicted interpersonal ambivalence. A meta-emotional view of emotions as human responses predicted paying attention to one's emotions. The ability to repair one's negative emotions predicted negative meta-emotional responses to negative emotions, a need for approval, and a "happy" mood, whereas the ability to repair one's negative emotions inversely predicted mental health problems. The ability to discern others' emotions inversely predicted a lack of sociability.

Participant female gender predicted positive expressiveness (emotional, verbal, and non-verbal) within the family of origin, paying attention to one's emotions, negative

meta-emotional responses to negative emotions, interpersonal sensitivity, and a need for approval. Participant male gender on the other hand predicted mother's and father's indifferent parenting styles, and clarity of one's emotions. Parent's non-married status predicted father's indifferent and abusive parenting styles, paying attention to one's emotions, and the ability to discern others' emotions, whereas parent's married status predicted negative meta-emotional responses to negative emotions. Participant's non-Caucasian ethnic background predicted mother's over-controlling parenting style, negative meta-emotional responses to positive emotions, and mental health problems, whereas participant's Caucasian ethnic background predicted having clarity of one's emotions. Participant's "poor" family income predicted mother's indifferent and abusive parenting styles, and father's over-controlling, indifferent, and abusive parenting styles. Conversely, participant's "rich" family income was associated with negative and positive expressiveness (emotional, verbal, and non-verbal) within the family of origin, and a "happy" mood.

Family income shared latent exogenous error (phi or ϕ) with marital status and ethnic background. Mother's over-controlling parenting style shared latent endogenous error (psi or ψ) with mother's indifferent and abusive parenting styles, and father's over-controlling and abusive parenting styles. Mother's indifferent parenting style shared latent endogenous error (psi or ψ) with mother's abusive parenting style, and father's over-controlling, indifferent, and abusive parenting styles. Mother's abusive parenting style shared latent endogenous error (psi or ψ) with father's over-controlling, indifferent, and abusive parenting styles. Father's over-controlling parenting style shared latent endogenous error (psi or ψ) with father's indifferent and abusive parenting styles.

Father's indifferent parenting style shared latent endogenous error (psi or ψ) with father's abusive parenting style. Negative expressiveness within the family of origin shared latent endogenous error (psi or ψ) with positive expressiveness within the family of origin. Interpersonal sensitivity shared latent endogenous error (psi or ψ) with interpersonal ambivalence and a lack of sociability. Interpersonal ambivalence shared latent endogenous error with interpersonal anger / hostility. Mental health problems shared latent endogenous error (psi or ψ) with respondent's current mood.

The maximum likelihood estimate of shared measurement error (theta epsilon or θ_ϵ) was 7.995 ($p < 0.05$) between the negative family expressiveness scale of the FEQ (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995) and the aggression / hostility subscale of the IIP-R (Kim & Pilkonis, 1999). The maximum likelihood estimates of shared measurement errors (theta epsilon or θ_ϵ) were -14.889, -19.51, and -18.69 (p's < 0.05) between the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997) and the interpersonal sensitivity, need for approval, and lack of sociability sub-scales of the IIP-R (Kim & Pilkonis, 1999). The maximum likelihood estimate of shared measurement error (theta epsilon or θ_ϵ) was -12.029 ($p < 0.05$) between the TMMS clarity of emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995) and the AEHR scale of the MEES (Myers, 2003).

As noted, a generalized least squares method of estimation was also utilized in order to address violations of multivariate normality (Hayduk, 1987). The chi-square statistic was non-significant ($\chi^2 = 157.377$, $p = 0.179$, $df = 142$) suggesting that the hypothesized model and the underlying characteristics of the real world student sample were somewhat similar. Other fit indices indicated adequate model fit and most were

within pre-specified cut-off values (*RMSEA* = 0.0491; *SRMR* = 0.0425; *GFI* = 0.961; *NNFI* = 0.940). Of note, was the significant prediction of negative family expressions by father's abusive parenting style. This is not an unusual finding considering the near significance of this pathway using the maximum likelihood method of estimation. Overall the results of the generalized least squares method of estimation are similar to those of the maximum likelihood method of estimation reported in this study. Hence, the previous model interpretations apply to both statistical outcomes.

Discussion

For the most part, the results of this study confirmed Blatt's (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism. In essence, negative childhood experiences contribute to self-criticism, which leaves the individual vulnerable to interpersonal distress and other mental health issues. What this study has added is a deeper understanding of the way in which childhood experiences contribute to an individual's emotional adaptability. The role of emotion and emotional development has never been specifically tested within a test of Blatt's overall model of self-criticism. In the self-critic's case, he or she experiences difficulties accessing, using, and regulating emotions, which further exacerbate their interpersonal distress and other mental health issues. However as was expected, certain anomalies arose in the details of the predicted models. Some anomalies were expected because most prior research used correlation or regression analyses to confirm their hypotheses. The strength of structural equation analysis is that it enables simultaneous testing for where there should be effects and their direction, where there should be a lack of effects, measurement error, and overall model fit. The following section begins with a discussion of each of the hypotheses of this study and the anomalies to those general hypotheses This is followed by the limitations, future directions, concluding statements, and a summary table (found on page166).

Developmental Effects On Self-Criticism and Emotional Processes

General support was found for the first hypothesis: Negative retrospective

perceptions of parental control, parental indifference, parental abuse, and familial expressiveness will lead to higher levels of self-criticism, a lack of attention to one's emotions, a lack of clarity of one's emotions, difficulty repairing one's negative emotions, difficulty discerning others' emotions, more negative meta-emotional structures, and fewer positive meta-emotional structures.

The first anomaly arose when family expressiveness in both models, and parenting in the micro model, became endogenous variables rather than exogenous variables as originally hypothesized. As such, perceptions of family expressiveness followed perceptions of parenting in a causal fashion. In the macro model, the more respondent's perceived mother and father as dysfunctional, the more respondent's perceptions of negative family expressiveness increased, whereas perceptions of positive family expressiveness decreased. Similarly, Clark and Phares (2004) found that as parental conflict increased, parental emotional availability decreased, and negative family expressiveness increased.

However, the role of parenting upon family expressiveness became more complex in the micro model. Perceptions of negative family expressiveness increased as respondent's perceptions of their mother's over-control, mother's abusiveness, and father's abusiveness increased. Conversely perceptions of mother's warmth and emotional availability (the opposite of indifference) increased perceptions of positive family expressiveness. Since mothers are often the primary caregiver, the degree of mother's influence on family expressiveness found in this study was not entirely unexpected. Other researchers have also found differential effects of mother's and father's parenting (Brewin, Andrews, & Furnham, 1996; Enns, Cox, & Larsen, 2000;

Mongrain, 1998; Sadeh, Rubin, & Berman, 1993). Lewis, Amini, and Lannon (2000) suggest that maternal attachment begins before birth within the womb, and that just before and following birth mother's oxytocin levels increase in order to stimulate birth, nursing, and attachment. Although mother's parenting appears to have a more profound effect on respondent's view of family expressiveness, it appears that fathers also contribute to family expressiveness. This study also provides further evidence of the sequelae of parental abuse (Blatt, 2005; Harris & Brown, 1996; Mendelson, Robins, & Johnson, 2002; Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997; Schore, 2001). For example, Mendelson, Robins, and Johnson (2002) found that an autonomous personality orientation (similar to self-criticism) was associated with experiences of physical and emotional abuse as well as a lack of parental care and warmth.

A unique finding of this study was the mediating effect of family expressiveness on parenting in predicting self-criticism. As stated in the first hypothesis, the word "and" connecting parenting and family expressiveness, suggested that negative family expressiveness should have an additive effect to that of parenting in the development of self-criticism rather than mediate the relationship. Blatt and colleagues (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) focuses primarily on the effects of cold harsh parenting in the development of self-criticism. In particular, Blatt (2004) targets the second year of life, 16 to 18 months of age, as the "critical" period for the development of self-criticism. The indirect effect of anomalous parenting on the development of self-criticism found in this study may be due to the reliance on retrospective self-report data. This retrospective data relies on

autobiographical memory. It has been suggested that autobiographical memory develops at a later period than does self-criticism. Generally, most individuals cannot remember significant events during the first years of life, and it is not until approximately four years of age when autobiographical memory develops (Fivush, 1994; Nelson, 1993). As such, the reliance upon autobiographical memory may present a confound to the findings of this study.

On the other hand, the mediating effects of negative family expressiveness and the moderate latent error associated with negative family expressiveness found in this study, suggest that the development of self-criticism may encompass the effects of other individuals including parents. As noted, Perry (2002; see also Gilbert, 2005) suggests that social experiences with parents as well as those with siblings, extended family, friends, and teachers are necessary for full complex socio-emotional development. The results of this study lead one to speculate that self-criticism may also develop as a result of interactions with other family members, as well as watching parents interact with others (Bandura, 1977). To this end Blatt (2004) does imply a broader view of the early social matrix when he states, "Negative caring experiences create disturbances in the process of representing the self and others in caring relationships" (p. 187). Although the effects of parenting were indirect, the results of this study were similar to other research studying the parental antecedents to self-criticism (Brewin, Andrews, & Furnham, 1996; Enns, Cox, & Larsen 2000; Koestner, Zuroff, & Powers, 1991; Mongrain, 1998; Quinlan, Blatt, Chevron, & Wein, 1992; Sadeh, Rubin, & Berman, 1993; Thompson & Zuroff, 1999a, 1999b, 1998; Whiffen & Sasseville, 1991; Whisman & Kwon, 1995; Zuroff, Koestner, & Powers, 1994).

Finally as predicted, aspects of self-perceived emotional intelligence follow early childhood experiences in a causal fashion. In both micro and macro models paying attention to one's emotions and the ability to repair one's negative emotions increased as respondent's perceptions of positive family expressiveness increased. In an unpublished doctoral dissertation, Wall (2003) found that retrospective perceptions of positive family expressiveness were associated with higher overall emotional intelligence scores. As was previously noted, when parents provide positive parenting experiences they reinforce positive warm compassionate neural circuitry of the child's developing brain (Gilbert, 2005; Panksepp, 2001; Perry; 2002; Schore, 2001), they enhance the attachment and social ranking strategies of emotional regulation (Sloman, Gilbert, & Hasey, 2003), and they assist in building intrapersonal and interpersonal socio-emotional resources (Eisenberg, Cumberland, & Spinrad, 1998; Fredrickson, 1998b; Gottman, Fainsilber-Katz, and Hooven, 1997). Negative childhood experiences on the other hand, reinforce the negative shame- / threat-based neural circuitry (Gilbert, 2005; Panksepp, 2001; Perry; 2002; Schore, 2001), under-stimulate the positive neural circuitry (Gilbert, 2005; Panksepp, 2001; Perry; 2002; Schore, 2001), inhibit the attachment and social ranking strategies (Sloman, Gilbert, & Hasey, 2003), and increase the likelihood of developing self-criticism or other pathologies (Blatt, 1974; Blatt, 2004; Blatt & Shichman, 1983; Blatt & Zuroff, 2002; Buck, 1999)

Also in the micro model, a meta-emotional view of emotions as human responses increased as respondents' perceptions of positive family expressiveness increased. In other words one can speculate that positive family emotional experiences help an individual access positive emotions and build resources to deal with negative emotions

(Fredrickson, 1998b), as well as a general acceptance that the common human experience encompasses both positive and negative emotions (Neff, 2003).

Somewhat more surprising were the findings that negative family expressiveness did not affect emotional processing. The final micro model was created with pathways leading from both negative and positive family expressiveness variables to the self-perceived emotional intelligence and meta-emotional variables. In keeping with the original hypotheses, it was assumed that negative expressiveness would have detrimental effects on emotional processes; however these effects were found to be statistically non-significant. These results contrast with those of Ramsden and Hubbard (2002), who found that fourth-graders emotional regulation abilities were inversely correlated with mother's perceptions of negative family expressiveness, albeit not correlated to positive family expressiveness. Additionally, Gottman, Fainsilber-Katz and Hooven (1997) found that the children of emotion dismissing parents were more afraid of their emotions. Two possibilities arise in explaining these effects. The first being that these effects were mediated by self-criticism, which in part entails an internal conflict over expressing one's emotions (Mongrain & Zuroff, 1994). The second possibility involves the sample used. Despite the 1999 Alberta divorce rate of 41% (Taylor & Aneilski, 2001), 75% of the respondents stated that their parents were married or common-law. Gottman (1995) has suggested that a stable lasting marriage normally consists of a minimum ratio of five positive interactions to one negative interaction. Because of the skewed marital demographics found in this study, one might surmise that many of the participants in this study came from stable relationships where there was a greater likelihood of overall positive family expressiveness versus negative expressiveness. Therefore, the particular

sample used in this study may have confounded the effects of negative family expressiveness by minimizing its effect on emotional processes.

The Effects of Self-Criticism on Emotional Processes

General support was found for the second hypothesis: Higher levels of self criticism will have a detrimental effect upon one's ability to access and utilize one's emotions, one's ability to repair negative emotions, one's ability to discern others' emotions. Self-criticism will also increase one's negative meta-emotional structures while decreasing one's positive meta-emotional structures.

In both macro and micro models the measured dimensions of self-perceived emotional intelligence followed self-criticism in a causal fashion. More precisely, in the macro model as levels of self-criticism increased, clarity of one's emotions and the ability to repair one's negative emotions decreased. Similarly, in the micro model higher levels of self-criticism predicted lower levels of paying attention to one's emotions, clarity of one's emotions, and the ability to repair one's negative emotions. Speranza and colleagues (2005) found that self-criticism in eating disordered patients was associated with the Difficulty Identifying Feelings scale of the TAS-20 (Bagby, Parker, & Taylor, 1994). The TAS-20 is a measure of alexithymia, often considered to be the opposite of emotional intelligence (Parker, Taylor & Bagby, 2001). Similarly, Lundh, Johnsson, Sundqvist, and Olsson (2002) found perfectionism was associated with alexithymia. In other words, it appears that self-critics experience difficulties accessing, utilizing, and regulating emotions.

Blatt (1974, 2004; Blatt & Shichman, 1983) and Bergner (1995) have suggested that self-critics' may experience impairments in their ability to enjoy positive emotions. In the micro model of this study, higher levels of self-criticism predicted higher levels of negative meta-emotional responses to both positive and negative emotions. This corroborates and expands on Mongrain's and Zuroff's (Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Mongrain & Zuroff, 1994; Vettese & Mongrain, 2000; Zuroff, Moskowitz, & Cote, 1999) findings that self-critics tend to be more conflicted or ambivalent over expressing their emotions, and that they experience more negative affect and less positive affect than non-self critics.

It appears that self-critics have a rigid, narrow and embattled self-concept. The Rogerian (1961) ideal of a fully functioning adult entails an individual who is flexible and open to all experiences including their emotions. This appears to be a crucial component of self-criticism – a lack of full emotional experiencing and processing. The results of this study suggest that self-critics experience difficulties accessing and using emotions. It has been determined that harsh childhood experiences may have over-stimulated self-critics' shame- / threat-based neural circuitry, whereas the lack of positive childhood experiences may have under-stimulated their positive neural circuitry (Gilbert, 2005; Panksepp, 2001; Perry; 2002; Schore, 2001). Because their parents may have been uncomfortable with, and punished, their emotional displays, self-critics may have learned that it was "safer" to avoid emotional displays rather than be "sorry" and face retribution (Gilbert, Durrant, & McEwan, 2006; Gilbert & Irons, 2005; Gottman, Fainsilber-Katz & Hooven, 1997; Wenzlaff & Eisenberg, 1998). Mongrain and Zuroff (1994) found that self-criticism was associated with emotional ambivalence. In this study, the associations

between self-criticism and negative meta-emotional structures suggest that self-critics are emotionally conflicted over the expression of fear, anger, and joy. Self-critics may try to avoid or suppress these emotions – a shame- / threat-based conditioned emotional response, which would make accessing and utilizing the adaptive functions of emotions difficult (Fredrickson, 1998a; Frijda, 1986; Gilbert & Irons, 2005; Greenberg, 2002). Being emotionally conflicted may leave self-critics at a loss as to regulating their own emotions because too much cognitive capacity is devoted to emotional avoidance or suppression and too little cognitive capacity devoted to problem solving (Heimpel, Wood, Marshall, & Brown, 2002).

The opposite of emotional avoidance may involve emotional approach (Stanton, Kirk, Cameron, & Danoff-Burg, 2000). Approaching one's emotions and allowing for the natural flow of emotions will lead to appropriate emotional processing, cognitive restructuring and physiological benefits (Foa & Kozak, 1986; Greenberg, Elliot, & Foerster, 1990; Stanton, Kirk, Cameron, & Danoff-Burg, 2000). For example, emotional suppression has been linked with the development of some cancers (Eysenck, 1994; Mate, 2003; Rogentine, van Kammen, Fox, Docherty, Rosenblatt, Boyd & Bunney, 1979), whereas emotional-approach coping has been associated with cancer survival rates (Stanton, Kirk, Cameron, & Danoff-Burg, 2000). Unfortunately, self-critics' difficulty accessing utilizing and regulating emotions also entails avoiding disconfirming evidence of their neurotic beliefs (Greenberg & Malcom, 2002; Rauch & Foa, 2006). Furthermore, self-critics' difficulty accessing positive emotions would also thwart their exploratory drives and the incumbent psychosocial resources acquired in exploration.

The Effect of Emotional Intelligence on Meta-Emotional Structures

General support was found for the third hypothesis: Paying attention to one's emotions, having clarity of one's emotions, the ability to repair one's negative emotions, and the ability to discern others' emotions will also contribute to an increase in one's positive meta-emotional structures and a decrease in one's negative meta-emotional structures.

In the micro model aspects of meta-emotion followed aspects of self-perceived emotional intelligence in a causal fashion. As clarity of one's emotions increased, negative meta-emotional responses to negative emotions decreased, whereas higher levels of emotional clarity were associated with greater likelihood of a meta-emotional view of emotions as human responses. An increased ability to repair one's negative emotions predicted higher levels of negative meta-emotional responses to negative emotions. Although this last effect was counter to predictions, it makes intuitive sense – as one's ability to regulate emotions increased, one would begin to discern which emotions are in need of more regulation, namely the negative emotions.

Despite these confirmatory findings, two anomalies arose within the third hypothesis. The first anomaly that arose was the finding that the negative meta-emotional responses to positive emotions were not affected by any of the aspects of self-perceived emotional intelligence, nor are they affected by childhood experiences. These results suggest that negative meta-emotional responses to positive emotions are a byproduct of self-criticism alone. Bergner (1995) and Blatt (1974, 2004; Blatt & Shichman, 1983) suggest that self-critics ability to experience enjoyment is impaired. Self-critics may attempt to suppress positive emotions, viewing them with suspicion and fear (Gilbert &

Irons, 2005), and/or self-critics may avoid the feed-back that positive emotions provide in the process of attaining goals (Carver & Scheier, 1990; Weiner, 1982) in order to focus on the end product – achieving often unattainable goals. Moreover, negative family expressiveness appears to define the social roles and emotional patterns imposed upon the self-critic (Averill, 1997). As such, self-criticism has been found to be associated with perceptions of inferiority (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Sturman & Mongrain, 2005). Thus it may be speculated that self-critics with their sense of inferiority do not feel entitled to the positive emotions that their non-self-critical colleagues are privileged to, albeit this proposition would require further investigation.

The second anomaly found within the third hypothesis involves the finding that in the macro model, clarity of one's emotions contributes to more attention paid to one's emotions. However, in the micro model, clarity of one's emotions contribute to a meta-emotional view of emotions as human responses, which in turn contributes to paying more attention to one's emotions. These findings may provide further explanation as to the possible processes involved within and between the constructs of emotional intelligence and meta-emotions.

The Effect of Self-Criticism and Emotional Intelligence on Interpersonal Problems and Other Mental Health Issues

General support was found for the fourth hypothesis: High levels of self-criticism will lead to interpersonal distress and other mental health issues and heightened negative moods. Conversely, paying attention to one's emotions, clarity of one's emotions, the ability to repair one's negative emotions, and the ability to discern others' emotions will

tend to ameliorate interpersonal distress and other mental health issues and lead to a more positive current mood.

In both macro and micro models, interpersonal distress followed self-criticism and some aspects of self-perceived emotional intelligence in a causal fashion. As the level of self-criticism rose, so too did the intensity of self-reported interpersonal distress in both macro and micro models. High self-criticism also predicted respondent's negative mood at the time of completing the battery of tests. The research is replete with studies confirming the connection between self-criticism and interpersonal problems (Besser, Flett, & Davis, 2003; Cox, Fleet, & Stein, 2004; Dunkley, Zuroff, & Blankstein, 2006; Mongrain, 1993; Mongrain, 1998; Mongrain, Vettese, Shuster, & Kendal, 1998; Mongrain & Zuroff, 1994; Santor & Yazbeck, 2006; Vettese & Mongrain, 2000; Wiseman, Mayseless, & Sharabany, 2006; Zuroff & Duncan, 1999; Zuroff & Fitzpatrick, 1995; Zuroff, Moskowitz, & Cote, 1999).

In the macro model, only the ability to discern others' emotions predicted lower levels of interpersonal distress. The micro model revealed more complex relationships. In the micro model, paying attention to one's emotions was associated with greater interpersonal sensitivity (sensitivity to others' criticism and rejection) and less interpersonal ambivalence (difficulties with others' authority). The ability to repair one's negative emotions predicted a higher need for approval from others. Finally, the ability to discern others' emotions predicted fewer difficulties socializing with others. Although the emotional intelligence research is more sparse than self-criticism regarding associations with interpersonal problems, other researchers have found similar results. For example, Lopes and colleagues (Lopes, Brackett, Nezlek, Schutz, Sellin, & Salovey, 2004; Lopes,

Salovey, Cote, Beers, & Petty, 2005; Lopes Salovey, & Strauss, 2003) found that the Managing Emotions scale (the ability to regulate and repair negative emotions) of the MSCEIT (Mayer, Salovey, & Caruso, 2001) was associated with self and others' perceptions of increased quality of social relationships and fewer negative interactions with friends, after controlling for verbal intelligence and personality . Conversely, Wei, Vogel, Ku, and Zakalik (2005) found that maladaptive emotional regulation strategies were associated with interpersonal problems. Although clarity of one's emotions did not predict interpersonal problems, Fitness (2001) found that higher levels on Clarity scale of the TMMS (Salovey, Mayer, Goldman, Turvey, Palfai, 1995) was associated with higher levels of marital happiness and greater ease in forgiving partner-caused marital offences (e.g., betrayal, neglect, abusiveness). Other researchers (Austin, Saklofske, & Egan, 2005; Saklofske, Austin, Minski, 2003; Salovey, Stroud, Woolery, & Epel, 2002; Summerfeldt, Kloosterman, Antony, & Parker, 2006) found general self-perceived emotional intelligence was associated perceptions of greater social network size, increased relationship quality / satisfaction, and less loneliness.

As such it appears that self-critics' harsh childhood experiences may reinforce shame- / threat-based conditioned responses (Gilbert & Irons, 2005) such that even low-level interpersonal stressors are perceived as threats (Schore, 2001). These perceptions may sensitize the self-critic to others' criticisms and rejections and spur them to seek others' approval. However as noted by Sturman and Mongrain (2005), self-critics' drive to achieve and compete in order to appease the inner critic may lead to difficulties regulating emotions and co-operating with others. Furthermore, self-critics' difficulties regulating emotions may lead to inappropriate expressions of anger that interfere with

interpersonal relations (Gilbert, Gilbert, & Irons, 2004). This hopeless struggle may lead self-critics to believe they are inferior (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Sturman & Mongrain, 2005) and thus it best to just avoid interpersonal interactions.

In both macro and micro models, mental health problems followed self-criticism and the ability to repair one's negative emotions in a causal fashion. As the level of self-criticism rose, so too did the intensity of self-reported mental health problems. Conversely, higher self-criticism also predicted respondent's negative mood at the time of completing the battery of tests. Again there are numerous studies connecting self-criticism with mental health problems (Besser, Flett, & Davis, 2003; Besser & Priel, 2003a, 2003b; Cox, Fleet, & Stein, 2004; Cox, McWilliams, Enns, & Clara, 2004; Enns, Cox, & Inayatulla, 2003; Fehon, Grilo, & Martino, 2000; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Mongrain, Lubbers, & Struthers, 2004; Mongrain, Vettese, Shuster, & Kendal, 1998; Mongrain & Zuroff, 1994; Sachs-Ericsson, Verona, Joiner, & Preacher, 2006; Shahar, Henrich, Blatt, Ryan, & Little, 2003; Shahar, Joiner, Zuroff, & Blatt, 2004; Sturman & Mongrain, 2005; Vettese & Mongrain, 2000; Whiffen, Parker, Wilhelm, Mitchell, & Malhi, 2003; Zuroff & Duncan, 1999).

The reverse profile was true for the ability to repair one's negative emotions, which was associated with respondent's positive mood at the time of completing the battery of tests and fewer self-reported mental health problems. Similarly, Salovey and colleagues (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995, Salovey, Stroud, Woolery, & Epel, 2002) found that clarity of one's emotions and the ability to repair one's emotions was inversely associated with depressive symptoms, self-reported distress, and rumination. Spence, Oades, and Caputi (2004) found that one's ability to

regulate emotions predicted higher levels of emotional well-being, whereas Wei, Vogel, Ku, and Zakalik (2005) found that maladaptive emotional regulation strategies were associated with depressed and anxious moods. Other researchers (Austin, Saklofske, & Egan, 2005; Furnham & Petrides, 2003b; Saklofske, Austin, Minski, 2003; Schutte et al, 1998; Trinidad & Johnson, 2002) have found general self-perceived emotional intelligence was associated with well-being, happiness, optimism, life satisfaction, and fewer depressive symptoms and unhealthy behaviors such as drinking alcohol or smoking tobacco. Conversely, Taylor (2001) found that alexithymia (difficulty identifying emotions) is associated with depression, substance abuse, eating disorders, post-traumatic stress disorder, borderline personality disorder, and somatoform disorders (medically unexplained physical symptoms and concerns).

When parents are mis-attuned to their infant's emotional needs, the child does not have an external source of emotional regulation leaving the child with few resources (thumb sucking, diverting gaze) to regulate their emotions (Braungart & Stifter, 1991; Schore, 2001; Stifter & Moyer, 1991). Prolonged mis-attunement and other harsh childhood experiences may prevent the natural processing of negative emotions in favor of other more expedient emotional suppression or avoidance strategies in order to be "safe" rather than "sorry" (Gilbert & Irons, 2005; Wenzlaff & Eisenberg, 1998). Without the natural processing of emotional information self-critical attitudes may remain unchallenged (Greenberg & Malcom, 2002; Rauch & Foa, 2006). Moreso, suppressing or avoiding negative emotions may instead verify and amplify self-critical attitudes (Gilbert & Irons, 2005; Swann, 1987, 1992, 1997; Swann, Wenzlaff, Krull, & Pelham, 1992). The end result of these thwarted emotional expressions, self-critical attitudes, and

dysfunctional emotional regulation strategies is a predisposition to mental health problems (Blatt, 2004; Buck 1999; Gilbert & Irons, 2005; Panksepp, 2001). Furthermore, thwarting positive emotional drives in childhood leaves the self-critic with fewer socio-emotional resources to regulate their emotions (Fredrickson, 1998b; Tugade & Fredrickson, 2004).

It should be noted that the effects of self-criticism upon interpersonal distress and other mental health issues was larger than those effects of emotional intelligence. Ledoux (1996) notes that the amygdala (the neurological center of fight or flight) can easily override the cortex in instances of danger, and the cortex is virtually powerless to regulate the fear response. This points to the evolutionary argument that it is more risky to miss threatening situations than it is to miss positive situations (Gilbert, 2007). Therefore regarding interpersonal distress and other mental health issues, how emotionally intelligent an individual is may be less important than how self-critical an individual is. For example, an individual with certain types of brain damage and low emotional intelligence may still be quite happy, whereas being ashamed of one's emotions may have pathological implications (Gilbert, 2007). On the other hand the weaker effects of emotional intelligence may also be indicative of the pathological nature of the outcome measures. Adding measures of social support, personal achievement, and well-being may increase the effect of emotional intelligence.

The Effect of Contextual Variables on Self-Critical Psychosocial Processes

General support was found for the fifth hypothesis: The processes outlined in the first four hypotheses will be affected by other contextual variables such as participant

gender in the macro model, or participant gender, parent's relationship status, socio-economic status, and ethnic background in the micro model. More specifically a female gender, parent's non-married marital status, lower socio-economic status, and a non-Caucasian background are expected to exacerbate negative processes outlined in the first four hypotheses.

In the macro model, being of male gender led to higher levels of self-criticism and greater clarity of one's emotions, whereas being of female gender led to a greater likelihood of perceiving of positive family expressiveness and increased attention being paid to one's emotions. In the micro model being of male gender predicted greater likelihood of perceptions of mother and father's indifference, clarity of one's emotions, but not higher levels of self-criticism. The female gender on the other hand was associated with greater likelihood of perceiving positive family expressiveness, increased attention being paid to one's emotions, more negative responses to negative emotions, greater interpersonal sensitivity, and greater need for approval. Some researchers (Petrides & Furnham, 2000b; Petrides, Furnham, & Martin, 2004; Schutte et al, 1998) have found that women score higher than men on self-perceived emotional intelligence, in particular the appraisal of others' emotions, however men are more likely to estimate a better understanding of their emotions than women (Petrides, Furnham, & Martin, 2004; Petrides & Furnham, 2000b). Although some researchers (Hansen, Umphress, Lambert, 1998; Horowitz, Rosenberg, Baer, Ureno, Villasenor, 1988) have not found gender differences on total scale scores of various incarnations of the Inventory for Interpersonal Problems, other researchers (Barkham, Hardy, & Startup, 1996; Riding & Cartwright, 1999) did find some weak subscale gender differences.

In the micro model, perceptions of lower family income predicted a greater likelihood of perceptions of mother and father's abusiveness, and was associated with parent's non-married / divorced marital status and a non-Caucasian ethnic background. Conversely, perceptions of higher family income predicted a greater likelihood of perceptions of mother and father's warmth and emotional availability (the opposite of indifference), father's increased allowance of autonomy (the opposite of over-control), more positive and negative family expressiveness, and a more positive current mood.

In the micro model, parent's non-married / divorced marital status predicted greater likelihood of perceptions of father's indifference and abusiveness. Interestingly parent's non-married / divorced marital status was also associated with increased attention being paid to one's emotions, greater ability to discern others' emotions, and fewer negative responses to negative emotions. Although their findings were not statistically significant, Barkham, Hardy, and Startup (1996) found a correlational trend indicating non-married marital status was associated with increased interpersonal problems ($t = 1.79$, $p = 0.08$, $N = 75$ married and 43 non-married).

In the micro model, a non-Caucasian ethnic background predicted greater likelihood of perceptions of mother's over-controlling parental style, less clarity of one's emotions, more negative responses to positive emotions, and higher levels of mental health problems. Parker and colleagues (Parker, Saklofske, Shaughnessy, Huang, Wood, & Eastabrook, 2005) found that Canadian aboriginal youth had lower self-perceived emotional intelligence scores than similarly matched Caucasian youth. Similarly, Elfenbein, Marsh, and Ambady (2002) report that lower socio-economic status and non-Caucasian ethnic groups performed more poorly on facial recognition tasks, independent

of emotional intelligence levels. Finally one can surmise that individuals from non-dominant cultures may feel inferior to their dominant counterparts. Thus the finding that a non-Caucasian background is associated with higher levels of mental health problems fits Gilbert and colleagues' (Allan & Gilbert, 1995; Gilbert, 1992, 2005) evolutionary assertions of social ranking and powerlessness, namely lower social ranks will experience higher mental health problems.

Other Findings

A number of associations of latent error variance were also found between related latent variables in the micro model. Within the parenting domain, mother's over-control shared latent error variance with mother's indifference and abusiveness, and with father's over-control. Mother's indifference shared latent error variance with mother's abusiveness, and father's over-control, indifference, and abusiveness. Mother's abusiveness shared latent error variance with father's over-control, indifference, and abusiveness. Father's over-control shared latent error variance with father's indifference and abusiveness. Father's indifference shared latent error variance with father's abusiveness. Within the family expressiveness domain, the latent error variance of negative family expressiveness was inversely associated with the latent error variance of positive family expressiveness. Within the interpersonal problems domain, interpersonal sensitivity shared latent error variance with interpersonal ambivalence and a lack of sociability, and interpersonal ambivalence shared latent error variance with interpersonal anger / hostility. Within the mental health domain, mental health problems shared latent error variance with respondent's current negative mood. These findings were as expected

since the latent variables generally had indicators from subscales of larger scales measuring cohesive constructs. Only the mental health problems and the respondent's current mood came from different scales, but they share aspects of the same construct.

Of concern however, were the findings of shared measurement error between the indicators of the latent variables. In the macro model, the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997) shares measurement error with interpersonal distress as measured by the IIP (Kim & Pilkonis, 1999). Similarly in the micro model, the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997) shares measurement error with the interpersonal sensitivity, need for approval, and lack of sociability scales of the IIP (Kim & Pilkonis, 1999). Although self-criticism was found to predict interpersonal distress after controlling for the measurement error in this model, these findings appear to point towards a problem of using shared items for two different scales. In setting out to revise the original DEQ (Blatt, D'Afflitti, & Quinlan, 1976) Santor, Zuroff, and Fielding (1997) strove towards shortening the scale, incorporating more user-friendly unit weighted scale scores, all the while retaining the psychometric properties of the original scale, in particular orthogonality. In doing so, they also designed a measure in which 12 items were inversely shared by both the dependency and the self-criticism scales. From Table 5, one may note that dependency was moderately correlated with interpersonal sensitivity ($r = 0.42, p < .01$), need for approval ($r = 0.51, p < .01$), and lack of sociability ($r = 0.26, p < .01$) – the same scales that shared measurement error with self-criticism. Therefore it would be important for future researchers using the MDEQ (Santor, Zuroff, & Fielding, 1997) to control for measurement error, lest they achieve over-inflated effect sizes of self-criticism with other interpersonally related constructs.

Perhaps an alternative would involve utilizing scales more selectively oriented towards certain aspects of self-criticism such as The Levels of Self-Criticism scale (Thompson & Zuroff, 2004), or the Forms and Functions of Self-Criticism scales (Gilbert, Clarke, Hempel, Miles, & Irons, 2004), or the Overt Self-Criticism scale (Powers & Zuroff, 1992; Powers, Zuroff, & Topciu, 2004).

As a point of interest, a structural equation model similar to the micro model was tested, except for the fact that it only used two single items from the self-criticism scale of the MDEQ (Santor, Zuroff, & Fielding, 1997). The first item, "Often I feel I have disappointed others" was chosen in attempt to reflect Thompson and Zuroff's (2004) comparative self-criticism. The second item, "I often find that I don't live up to my own standards or ideals" was chosen in attempt to reflect Thompson and Zuroff's (2004) internalized self-criticism. Gilbert (2007) notes these items also reflect the self-evaluative and high standards dimensions of perfectionism respectively (Dunkley, Zuroff, Blankstein, 2003; Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Significant pathways led from the comparative self-criticism item to interpersonal sensitivity, need for approval, lack of sociability, depressive symptoms, and current negative mood (T = 2.693, T = 5.739, T = 4.877, T = 4.476, T = 3.438 respectively, p's < 0.05). The internalized self-criticism item presented a very different profile. Significant pathways led from the internalized self-criticism item to interpersonal ambivalence, interpersonal aggression / hostility, and lack of sociability (T = 2.078, T = 2.298, T = 2.198 respectively, p's < 0.05), but not depressive symptoms or current negative mood. The more significant effect of the comparative self-criticism may reflect a sense of shame and inferiority, and attempts to avoid other's criticism (Gilbert, 2007). Other researchers

(Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Gilbert, Durrant, & McEwan, 2006; Thompson & Zuroff, 2004) have also found that different aspects of self-criticism present different profiles in association with other mental health measures.

In the micro model, the negative family expressiveness scale of the FEQ (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995) shares error variance with the interpersonal anger / hostility scale of the IIP (Kim & Pilkonis, 1999). This finding may reflect the population sampled for this study. Many of the university students sampled in this study likely live at home with their families in order to save on expenses. Since a large portion of a student's interpersonal domain would include their families, items such as "Expressing anger at someone else's carelessness" from the FEQ and items such as "I fight with other people too much" from the IIP may be expected to cause some shared measurement error between the two scales. It is hypothesized that this measurement error may be lower or vanishes if a general or a clinical population were sampled. Also in the micro model, clarity of one's emotions as measured by the TMMS (Salovey, Mayer, Goldman, Turvey, Palfai, 1995) shares measurement error with the meta-emotional view that emotions are human responses as measured by the MEES (Myers, 2003). Although this finding makes intuitive sense, it likely also reflects the lack of vigorous construct validity testing of the MEES.

Limitations

This study was limited by many of the resource limitations that plague many other graduate student studies in the social sciences. For example, the use of a convenient

student sample may affect the generalizability of this study. Compared to an average population, university students are more likely to be younger, more highly educated, come from a higher socio-economic status, and live with their parents. The self-report information used in this study is also not corroborated with the reports of others, historical information, clinically derived data, physiological data, experimenter observations, or experimentally derived data. As such, this self-report data may introduce self-report biases into the findings of this study. Finally limiting data to retrospective accounts of parenting and family expressiveness may exclude the contributions of others (e.g., teachers, peers, extended family, coaches, mentors, etc.) or of traumatic incidents (e.g., death of a parent, life threatening disease, war) in the development of self-criticism and mental health problems. For example, Brown and Harris (1978) found that traumatic incidents early in life increased the risk of depression in adulthood. Conversely, Werner and Smith (1982) found that a caring other helped some individuals develop resiliency towards the effects of chaotic family lives. The latent error variances found within this study point to the fact that other un-measured factors also contribute to these models.

Another limitation of this study concerns some of the measures used for this study. A general self-criticism scale such as the MDEQ (Santor, Zuroff, & Fielding, 1997) may tap both functional and dysfunctional qualities just as those found in related measures of perfectionism, autonomy, and self-criticism itself (Clark, Steer, Beck, & Ross, 1997; Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Slaney, Rice, Mobley, Trippi, & Ashby, 2001). The five-item DUKE (Parkerson, Broadhead, & Tse, 1990) used for this study may not provide the same breadth or specificity of mental health problems as other measures such as the Symptom Check List (Derogatis, 1977) or the Beck Depression

Inventory (Beck, Steer, & Brown, 1996). There is some debate over the operationalization of emotional intelligence (Matthews, Roberts, Zeidner, 2003; Petrides & Furnham, 2000a; Salovey, Stroud, Woolery, & Epel, 2002). This study used convenient measures of trait emotional intelligence, which have been found to have moderate correlations with the MSCEIT (Mayer, Salovey, & Caruso, 2001), an ability measure (Bar-On, 2000; Mayer, Caruso, & Salovey, 2000b; Gohm, & Clore, 2002; Lopes, Salovey, & Strauss, 2003). As already noted, the MEES (Myers, 2003) is an experimental scale developed for this study and will require further empirical validation. In particular, Gilbert and colleagues (Gilbert, 2005; Gilbert & Irons, 2005) notes the importance of anxiety and shame associated with self-criticism – two emotions not measured by the MEES in its current form (Myers, 2003)

This study makes some assertions about causality. However, in essence, this study is a correlational study – no variables were manipulated as is done in the process of an experiment. It is well known that correlation does not necessarily imply causation. Although, this study utilized a complex statistical method to determine the direction of causality of a number of un-manipulated variables, at best, structural equation modeling can only give a partial, but parsimonious, view of the underlying causal world (Hayduk, 1987; Shipley, 2002).

Furthermore, although this study uses retrospective data, it is in essence a cross-sectional study limited to the slice of time at which the study was conducted. In particular it does not directly assess the critical time at which self-criticism is said to develop, 16 to 18 months of age (Blatt, 2004). This study, as with much of the literature presented, treats the parent-child interaction as uni-directional when in fact it can be bi-directional

(Eisenberg, Fabes, Shepard, Guthrie, Murphy, & Reiser, 1999; Harris, 1998; Zahn-Waxler, Klimes-Dougan, & Kendziora, 1998). For example a child's temperament may limit the child's range of responses to parental behaviors (Cassidy, 1994). Additionally, a child's temperament may shape parental responses to the child's behaviors (Cassidy, 1994). However, Cassidy, (1994) and Sroufe (1985) suggest that child temperament is at most a weak effect in determining parent-child interactions and consequent child development. From another perspective, the cross-sectional design may not take into account the effect of past stressors, past interpersonal distress and other past mental health issues that may increase the vulnerability to current levels of self-criticism and mental health issues (Coyne & Thompson, 2003; Santor, 2003).

It is noted that no one study can do all things, nor does scientific research attempt to do so. Despite the limitations, this study successfully used structural equation modeling to provide general confirmation of Blatt's (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism. This study also incorporated emotional processes associated with self-criticism and it placed self-criticism and emotional processes within an evolutionary framework. This study is presented as an addition to the literature related to developmental experiences, self-criticism, emotional intelligence, interpersonal distress and other mental health issues, and evolutionary processes. It is also presented as a point of departure for debate and future research.

Future Directions

Although this study has provided general confirmation of Blatt's (Blatt, 1974,

2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental theory of self-criticism, the results of this study beg further examination of the three primary areas measured: childhood experiences, self-criticism and emotional experience, and the interpersonal / mental health sequelae. The results of this study provide support for Gilbert and colleagues' (Gilbert & Irons, 2005; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006) assertions that self-criticism reflects an overdeveloped shame- / threat-based system and an underdeveloped warmth / self-soothing system. The results of this study suggest that the overdeveloped shame- / threat-based system developed in response to childhood experiences of threats and abuse, as well as childhood experiences of thwarting the "seeking / exploration" impulse (Panksepp, 2001) which would have provided additional resources to counter the shame- / threat-based system (Fredrickson, 1998a; 1998b). In conjunction with these mechanisms the results of this study suggest that the under-developed warmth / self-soothing system developed in response to a lack of activation or stifling of the "care and panic" systems during childhood (Panksepp, 2001). In other words, the lack of positive childhood experiences may have impaired the self-critics' ability to access and utilize positive emotions and their ability to regulate negative emotions. However, these assertions and postulations require further investigation using non-retrospective or corroborative data, and/or other sample populations in order to more precisely determine where do these powerful and damaging self-critical voices arise (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006).

Researchers (Gilbert, Allan, Goss, 1996; Teicher, Samson, Polcari, & McGreenery, 2006) have found that shaming experiences and verbal abuse can have a greater effect upon predicting adult psychopathology than physical abuse. Shaming

experiences are believed to be a major contributor to the development of self-criticism (Gilbert, 2005). Gilbert (2007) questions the ability of the MOPS (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997) to measure shaming experiences during childhood. Thus future directions should further investigate the effect of shaming experiences upon the development of self-criticism, shame, inferiority, and subsequent psychopathology.

Gilbert (2005) has taken a different perspective to Blatt's (2004) and developed an evolutionary model of self-criticism and compassion. In this theory Gilbert has noted that self-critics engage in a number of involuntary subordinate / defeat strategies (Sturman & Mongrain, 2005) in order to function in life. These strategies may include social comparisons of inferiority, blaming self for others' transgressions, inhibition of fight or flight responses, inhibition of exploratory behaviors, and focusing upon achievements (Allan & Gilbert, 1995; Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gilbert, Gilbert & Irons, 2004; Sturman & Mongrain, 2005). Self-criticism itself may also involve a number of positive and negative forms and functions (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Powers & Zuroff, 1992; Powers, Zuroff, & Topciu, 2004; Thompson & Zuroff, 2004). And finally self-criticism may involve a turmoil of internal emotions such as anxiety, defeat, shame, disgust, and resentment (Gilbert, 2005; Gilbert & Irons, 2005; Gilbert, Gilbert & Irons, 2004). The results of this study also suggest that self-critics experience difficulties accessing, utilizing, and regulating emotions, and they may hold negative attitudes towards expressing both positive and negative emotions. As such, future research may be directed towards integrating these developmental and evolutionary models.

Self-critics may be aware that their self-critical thoughts are self-generated and illogical (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gilbert, Birchwood, Gilbert, Trower, Hay, Murray, Meaden, Olsen, & Miles, 2001). However, because self-critics experience difficulties accessing and utilizing emotions, disconfirmatory evidence may not be presented on a limbic level for emotional processing leaving self-critics depressed and trapped within their "neurotic" fear-based life strategies (Foa & Kozak, 1986; Gilbert, 2005; Greenberg, Elliot, & Foerster, 1990; Greenberg & Malcom, 2002; Rauch & Foa, 2006). It would be useful to further delineate the strategies, forms, functions, emotions, and emotional processes that contribute to mental health problems. In particular, Gilbert and colleagues' (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Gilbert & Irons, 2005) advice to clinicians to balance self-criticism with self-compassion may require further investigation considering self-critics' negative attitudes towards expressing positive emotions as found in this study.

A number of researchers have found that depressed and self-critical individuals generate interpersonal stress, which leads to the interpersonal rejection these individuals are trying to avoid (Hammen, 1991; Joiner, Alfano, & Metalsky, 1992; Santor, Pringle, & Israeli, 2000; Santor & Yazbeck, 2006; Zuroff, Moskowitz, & Cote, 1999). Although research has examined evolutionary strategies, self-critical forms and functions, and emotional processes that contribute to mental health problems, researchers have not delineated how all these aspects combined contribute to interpersonal problems. Nor has research studied how interpersonal problems may reinforce self-criticism. This study suggests how this interpersonal reinforcement of self-criticism may occur. Within a university student population sample self-critics' difficulty regulating negative emotions

contributes to interpersonal problems with aggression. However, these interpersonal problems with aggression are associated with negative family expressiveness, which in turn contribute to self-critical attitudes. Gilbert and colleagues (2005; Gilbert, Clarke, Hempel, Miles, & Irons, 2004) have suggested that intrapersonal self-attack strategies have parallels in interpersonal strategies of subordinating or cleansing non-dominant out-groups. Thus future research may wish to investigate how domineering family expressions may lead to self-attacking forms of self-criticism, which could contribute to difficulties regulating one's negative emotions and inappropriate emotional outbursts. It is speculated that these negative outbursts would engender renewed family efforts to dominate the self-critical individual.

Other obvious points of departure for future research would be to address some of the limitations of this study. From the author's own, albeit limited, experience as a clinician and as a teaching assistant, a higher proportion of clinical clients than students have been exposed to anomalous parenting practices and disruptive family environments, which suggests the need to study a clinical population. Using an ability measure of emotional intelligence (MSCEIT; Mayer, Salovey, & Caruso, 2001), a dimensional measure of positive and negative affect (Watson, Clark, & Tellegen, 1988), or clinically derived measures of mental health (BDI; Beck, Steer, & Brown, 1996; SCL; Derogatis, 1977) would likely add validity to future studies. As noted, the MEES (Myers, 2003) needs further refinement and validation, possibly incorporating other emotions such as anxiety and shame. Measuring variables at least twice over a period of time, or obtaining corroborating evidence, may help control for daily fluctuations of mood (Dozois, Dobson, & Ahnberg, 1998) and self-perception (Coyne & Thompson, 2003). Measuring

contextual variables such as temperament (Cloninger, Svrakic, & Przybeck, 1993), life stressors and stressor impact (Sarason, Johnson, & Siegel, 1978), goals / strivings (Emmons, 1986; Fleeson & Cantor, 1995), emotional goals (King, & Emmons, 1990), or coping strategies (Endler & Parker, 1990; Stanton, Kirk, Cameron, & Danoff-Burg, 2000) may add to the model and reduce latent error variance. Participant parent's marital status, ethnicity, and family income are normally relegated to descriptives of research samples; however their effects played a role in the findings of this study, which suggests the need of more in-depth study of these variables.

Self-criticism and perfectionism have been found to be associated with increased stress metabolites, somatic complaints, and illness (Fry, 1995; Gruen, Silva, Ehrlich, Schweitzer & Friedhoff, 1997; Martin, Flett, Hewitt, & Krames, 1996; Saboonchi, & Lundh, 2003). The repression of anger, the denial of vulnerability, and "compensatory hyper-independence" typical of self-critics have also been found to be associated with life debilitating and life threatening illnesses (Eysenck, 1994; Mate, 2003; Rogentine, van Kammen, Fox, Docherty, Rosenblatt, Boyd & Bunney, 1979; Sarno, 2006). On the other hand, positive emotions, aspects of emotional intelligence, and emotion-approach coping appear to provide health enhancing effects (Austin, Saklofske, & Egan, 2005; Extremera, & Fernandez-Berrocal, 2002; Goldman, Kraemer, & Salovey, 1996; Ioannis, & Ioannis, 2005; Ryff, Love, Urry, Muller, Rosenkranz, Friedman, Davidson, & Singer, 2006; Salovey, Stroud, Woolery, & Epel, 2002; Stanton, Kirk, Cameron, & Danoff-Burg, 2000; Tugade & Fredrickson, 2004). Although psychologists are primarily concerned about mental health issues, inappropriate emotional expression associated with self-criticism may contribute to physical health problems, which may in turn exacerbate interpersonal

distress and other mental health issues. Furthermore, self-critics' interpersonal problems may also interfere with the health benefits of social support (Brown, Nesse, Vinokur, & Smith, 2003). Therefore, future directions may include a measure of physical health problems such as health sub-scale included in the Duke (Parkerson, Broadhead, & Tse, 1990).

Finally, the author of this study followed Coyne and Whiffen's (1995) admonitions to treat all data as continuous variables. Although there are merits to this approach, Coyne and Whiffen (1995) are not without their detractors. Zuroff, Mongrain, and Santor (2004) contend that dichotomizing scores in order to determine extreme populations "is a legitimate option, which like all [research] designs has advantages as well as disadvantages" (p. 492). The advantages include increased statistical power (McClelland & Judd, 1993), whereas the disadvantages include distorted parameter estimates of effects (Cortina & DeShon, 1998; Coyne, Thompson, & Whiffen, 2004). Future research might contemplate conducting a similar study utilizing a different research design. This might entail dichotomizing data into extreme scoring groups and using a MANCOVA for data analysis. Although it was beyond the scope of this study, dependency and the interaction effects between those high in self-criticism and those high in dependency could also be analyzed using this different statistical perspective (Coyne & Whiffen, 1995; Zuroff, Mongrain, & , 2004). Future research, again utilizing this approach, might also wish to determine the effects of extreme groups within parenting styles and family expressiveness, and their interaction effects.

Conclusion

This study has provided general support for Blatt's (Blatt, 1974, 2004; Blatt & Maroudas, 1992; Blatt & Shichman, 1983; Blatt & Zuroff, 2002) developmental model of self-criticism, namely exposure to harsh childhood experiences leads to the development of a self-critical personality structure, which in turn predisposes the individual to interpersonal distress and other mental health issues. This study has also placed emotional processes within the context of the developmental model of self-criticism, rather than treat emotions purely as outcome variables (Greenberg, 2002). As such the results of this study suggest self-criticism involves dysfunctional emotional processes that contribute to interpersonal distress and other mental health issues. Conversely, positive childhood experiences can contribute to the ability to access the adaptive function of emotions, and the ability to repair negative emotions, which in turn contribute to mental health and the resource building associated with positive emotions (Fredrickson, 1998a).

The study also opens the door to integrating developmental and evolutionary models of self-criticism. Human nature may be expressed in both negative (e.g., ethnic cleansing / genocide, self-persecution) and positive (e.g., altruism, self-compassion) manners. The detection of distress within another may elicit attempts to help / nurture, teach / correct, dominate / destroy, or flee the distressed individual (Gilbert, 2005; Gilbert, Clarke, Hempel, Miles, & Irons, 2004). Similarly internal distress may elicit self-compassion, attempts to self-correct, attempts to escape, and/or self-persecution (Gilbert, 2005; Gilbert, Clarke, Hempel, Miles, & Irons, 2004). When internal distress is met with thwarted attempts to escape calloused self-persecution, pathology may ensue. Having the ability to access positive emotions and be self-compassionate allows us to tolerate

ambiguity while building psychosocial resources (Fredrickson, 1998a; Gilbert & Irons, 2005; Neff, 2003). However, shame- / threat-based emotions tend to narrow our psycho-behavioral-emotional repertoire (Fredrickson, 1998a). Therein lies the problem of self-criticism – a dearth of self-compassionate emotions and well-worn access to negative critical emotions.

The results of this study suggest that self-critics experience prolonged attachment ruptures, which inhibits the acquisition of appropriate emotion regulation strategies (Cassidy, 1994; Sloman, Gilbert, & Hasey, 2003) and increases the frequency of submissive / appeasement strategies (Gilbert, Cheung, Grandfield, Campey, Irons, 2003). As adults, self-critics struggle to define themselves within the social context and their difficulties over or under regulating emotions at inappropriate times may engender interpersonal rejection (Joiner, Alfano, & Metalsky, 1992; Sloman, Gilbert, & Hasey, 2003; Zuroff, Moskowitz, & Cote, 1999). When faced with setbacks in life, self-critics may be unable to elicit their own self-soothing emotions and or the reassurances of significant others (Sloman, Gilbert, & Hasey, 2003). When efforts to attain ever higher standards fail gain other's approval, self-critics may find themselves in despair experiencing high levels of interpersonal distress and other mental health issues (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Sloman, Gilbert, & Hasey, 2003; Sturman & Mongrain, 2005; Wyatt & Gilbert, 1998; Zuroff, Moskowitz, & Cote, 1999).

Summary Chart

Key Findings	Limitations	Future Directions
• Negative parenting (i.e., over-control, criticism, and abuse) contributes to negative family emotional environment.	• Finding based upon retrospective data • Cross-sectional design • The effects of temperament were not measured	• Include corroborative data or temperament measure • Utilize experimental or longitudinal design • Utilize alternative sample populations (e.g., clinical)
• Negative family emotional environment contributes to the development of self-criticism	• Limited measurement of shaming experiences • Lack of measurement of witnessing parental abuse	• Include more extensive exploration of shame, fighting, favoritism, etc. during childhood
• Self-criticism entails beliefs that emotions are to be feared	• MEES requires further psychometric development	• Continue development of MEES or find alternative measures of meta-emotion
• Self-criticism interferes with emotional intelligence	• Debate over how to measure emotional intelligence • Self-compassion not measured	• Utilize measures of emotional processing ability (e.g., MSCEIT) and/or self-compassion • Utilize measures of physiological arousal or limbic activity

• Self-criticism contributes to interpersonal problems	• Shared measurement error between MDEQ and IIP • Effects of social comparison and rejection not measured	• Utilize alternate measures of self-criticism • Include measures of social comparison, perceptions of other's criticisms and shaming behaviors, and interpersonal rejection
• Self-criticism contributes to other mental health issues	• Self-criticism may involve different forms and functions, which may cause different mental health outcomes	• Measure self-evaluative concerns, forms and functions of self-criticism, and/or overt self-criticism
• Positive parenting (i.e., care and warmth) contributes to positive family emotional environment	• The effects of siblings, and other supportive individuals (e.g., aunts, teachers) not measured	• Explore a broader context of early emotional experiences
• Positive family emotional environment contributes to the development of emotional intelligence	• The effects of life stress was not measured	• Include a life stress measure and explore the interactions between personality, stress impact, and emotions

• Emotional intelligence entails beliefs that emotions are natural human experiences not to be feared	• Current version of MEES does not include pride, shame, anxiety	• Measure the meta-emotional structures of a wider variety of emotions
• Emotional intelligence contributes to satisfying relationships and mental health.	• Mental health measure weak. • Contributions of emotional intelligence weaker than contributions of self-criticism on relationships and vulnerability	• Use more in depth measures of pathology, psychopathology, coping, social support, and well-being

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Appendix

July 22, 2003

Research Consent Form

Title of Research: **Investigating Aspects of Emotional Intelligence and Self-Criticism**
Researchers: Patrick Myers (graduate student) and William Whelton (supervisor). Researchers are from the Department of Educational Psychology at the University of Alberta.

Purpose of Research: The research study in which you are about to participate is designed to examine the relationship between retrospective views of emotional expression in your family, as you were growing up, and current self-criticisms, thoughts and feelings about emotions, and interpersonal relationships.

Description of Research: If you consent to participate you will first be asked to sign this consent form. This consent form will be kept separate from the rest of the questionnaire in order to maintain your anonymity and confidentiality. Then you will be asked some personal information such as age, employment status, etc. You will then be given a randomized series of self-report rating scales to fill out. These questionnaires tap your perceptions of yourself, your feelings, your upbringing, and your interpersonal relations. Don't over analyze the questions. There are no right or wrong answers. Just answer the questions with the first answer that comes to mind by circling the appropriate number. However, if you want to change an answer, just cross it out and circle the answer you want. IMPORTANT! DO NOT PUT YOUR NAME ON ANY OF THE QUESTIONNAIRES. SIGN ONLY THIS CONSENT FORM. Again questionnaires and consent forms will be kept separately in order to maintain your anonymity and confidentiality. The whole procedure should take about one half hour of your time.

Potential Risks and Benefits: There are no expected risks associated with your participation in this research. You will not benefit directly from participation in this research.

Confidentiality: Confidentiality will be respected. The information that you will provide will be kept confidential and anonymous. Only the researchers will have access to the data. Data will be analyzed as a group.

Participation: Your participation is voluntary. You have the right to refuse to participate in any aspect of the study. You may also withdraw from the study at any point without penalty. If there are questions that make you uncomfortable, do not answer them. However we appreciate your participation in answering as many questionnaires and questions as you can.

Consent: By signing this form I agree to participate in the described study. I have read and understood the above description of the research. I am aware of the nature and the procedures of the study. I understand my rights and I will ask the researcher for further clarification at anytime I wish.
(print name) _____
(sign name) _____
(date) _____

July 22, 2003

Research Debriefing Form

Title of Research: **Investigating Emotional Socialization And Its Consequences**

Thank-you for your time and cooperation in this study. The study you have participated in is one that attempts to examine the relationship between retrospective views of emotional expression in your family as you were growing up, and current self-criticisms, thoughts and feelings about emotions, and interpersonal relationships. Research has suggested that there may be a relationship between your upbringing and your current thoughts and feelings about emotions. Other research has suggested that there may be a relationship between your upbringing and your current interpersonal relationships. The findings of the present study should help researchers to encompass a more rounded approach to studying the individual in a social context.

If you wish to explore this area further you may find the following references educational:

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Should you have any concerns regarding the information you provided, please contact the researchers listed below. If you have any further questions or if you wish to know more about the outcome of this study, please feel free to contact the researchers listed below. The results of this study should be available around August 2005.

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Demographics Form (indicate the appropriate answer with a check-mark)

Gender: Female_____ Male_____

Age: _____

Marital Status: Married or common-law_____
Separated, divorced, or remarried_____
Widowed_____
Single_____

Parent's Marital Status: Single_____
Married_____
Separated, divorced, or remarried_____
Deceased_____

Employment Status: Full-time_____
Part-time_____
Homemaker_____
Student_____
Unemployed_____

Education: Some high school_____
High school diploma_____
Trade certificate_____
Some post secondary_____
College diploma_____
Bachelor's degree_____
Master's degree_____
Ph.D. or M.D._____

Ethnic background: Caucasian_____
Native North American_____
African-Canadian_____
Asian-Canadian_____
Indo-Canadian_____
Latin-Canadian_____
Other_____ (please identify)_____

The MOPS (Measure of Parenting Style)

This questionnaire lists various behaviors of parents. Please rate how true you judge each item to be as a description of your mother and then of your father during your first 16 years by circling the appropriate boxes.

MOTHER

1 Was overprotective of me
Extremely True Moderately True Slightly True Not True

2 Was verbally abusive towards me
Extremely True Moderately True Slightly True Not True

3 Sought to make me feel guilty
Extremely True Moderately True Slightly True Not True

4 Left me on my own a lot
Extremely True Moderately True Slightly True Not True

5 Ignored me
Extremely True Moderately True Slightly True Not True

6 Was critical of me
Extremely True Moderately True Slightly True Not True

7 Was unpredictable towards me
Extremely True Moderately True Slightly True Not True

8 Was uncaring of me
Extremely True Moderately True Slightly True Not True

9 Made me feel unsafe
Extremely True Moderately True Slightly True Not True

10 Was rejecting of me
Extremely True Moderately True Slightly True Not True

11 Was physically violent or abusive towards me
Extremely True Moderately True Slightly True Not True

12 Would forget about me
Extremely True Moderately True Slightly True Not True

13 Was uninterested in me
Extremely True Moderately True Slightly True Not True

14 Was over-controlling of me
Extremely True Moderately True Slightly True Not True

15 Made me feel in danger
Extremely True Moderately True Slightly True Not True

Note: The same questions are repeated for father

The F E Q (Family Expressiveness Questionnaire)

This is a questionnaire about family expressiveness. We would like you to tell us how often certain activities occurred in your family, compared to other families, while you were growing up. Please circle a number on the rating scale from 1 (not at all frequently) to 9 (very frequently) that indicates how often the following situations occurred in your family compared to other families while you were growing up.

1.) Showing contempt for another's actions
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

2.) Expressing dissatisfaction with someone else's behavior
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

3.) Praising someone for good work
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

4.) Expressing anger at someone else's carelessness
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

5.) Demonstrating admiration
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

6.) Expressing disappointment over something that didn't work out
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

7.) Telling someone how nice they look
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

8.) Sulking over unfair treatment by a family member
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

9.) Blaming one another for family troubles
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

10.) Surprising someone with a little gift or favor
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

11.) Putting down other people's interests
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

12.) Showing dislike for someone
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

13.) Expressing excitement over one's future
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

14.) Expressing sympathy for someone's troubles
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

15.) Going to pieces when tension builds up
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

16.) Expressing deep affection or love for someone
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

17.) Quarrelling with a family member
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

18.) Spontaneously hugging a family member
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

19.) Expressing momentary anger over a trivial irritation
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

20.) Snuggling up to a family member
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

21.) Trying to cheer up someone who is sad
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

22.) Telling family members how happy you are
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

23.) Threatening someone
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

24.) Expressing gratitude for a favor
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 – 9

The MDEQ (McGill Revision of the Depressive Experiences Questionnaire)

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. Please circle a number indicating the extent of your agreement from 1 (strongly disagree) to 7 (strongly agree) for each item.

1 Without support from others who are close to me, I would be helpless
1 2 3 4 5 6 7

2 I tend to be satisfied with my current plans and goals, rather than striving for higher goals
1 2 3 4 5 6 7

3 When I am closely involved with someone, I never feel jealous
1 2 3 4 5 6 7

4 I often find that I don't live up to my own standards or ideals
1 2 3 4 5 6 7

5 The lack of permanence in human relationships doesn't bother me
1 2 3 4 5 6 7

6 If I fail to live up to expectations, I feel unworthy
1 2 3 4 5 6 7

7 Many times I feel helpless
1 2 3 4 5 6 7

8 I seldom worry about being criticized for things I have said or done
1 2 3 4 5 6 7

9 There is a considerable difference between how I am now and how I would like to be
1 2 3 4 5 6 7

10 I enjoy sharp competition with others
1 2 3 4 5 6 7

11 There are times when I feel "empty" inside
1 2 3 4 5 6 7

12 I tend not to be satisfied with what I have
1 2 3 4 5 6 7

13 I don't care whether or not I live up to what other people expect of me
1 2 3 4 5 6 7

14 I become frightened when I feel alone
1 2 3 4 5 6 7

15 I would feel like I'd be losing an important part of myself if I lost a very close friend
1 2 3 4 5 6 7

16 People will accept me no matter how many mistakes I have made
1 2 3 4 5 6 7

17 I have difficulty breaking off a relationship that is making me unhappy
1 2 3 4 5 6 7

18 I often think about the danger of losing someone who is close to me
1 2 3 4 5 6 7

19 I am not very concerned with how other people respond to me

1 2 3 4 5 6 7

20 No matter how close a relationship between two people is, there is always a large amount of uncertainty and conflict

1 2 3 4 5 6 7

21 I am very sensitive to others for signs of rejection

1 2 3 4 5 6 7

22 Often I feel I have disappointed others

1 2 3 4 5 6 7

23 I constantly try and very often go out of my way to please or help people I am close to

1 2 3 4 5 6 7

24 If someone makes me angry, I let him/her know how I feel

1 2 3 4 5 6 7

25 I find it very difficult to say "No" to the requests of friends

1 2 3 4 5 6 7

26 I never feel secure in a close relationship

1 2 3 4 5 6 7

27 The way I feel about myself frequently varies: there are times when I feel extremely good about myself and other times when I see only the bad in me and feel like a total failure

1 2 3 4 5 6 7

28 Even if the person who is closest to me were to leave, I could still "go it alone"

1 2 3 4 5 6 7

29 One must continually work to gain love from another person: that is, love has to be earned

1 2 3 4 5 6 7

30 I am very sensitive to the effects my words or actions have on the feelings of other people

1 2 3 4 5 6 7

31 I am a very independent person

1 2 3 4 5 6 7

32 I often feel guilty

1 2 3 4 5 6 7

33 I think of myself as a very complex person, one who has "many sides"

1 2 3 4 5 6 7

34 I worry a lot about offending or hurting someone who is close to me

1 2 3 4 5 6 7

35 Anger frightens me

1 2 3 4 5 6 7

36 I can easily put my own feelings and problems aside and devote my complete attention to the feelings and problems of someone else

1 2 3 4 5 6 7

37 If someone I cared about became angry with me, I would feel threatened the he/she might leave me

1 2 3 4 5 6 7

38 After a fight with a friend, I must make amends as soon as possible

1 2 3 4 5 6 7

39 I have a difficult time accepting weakness in myself

1 2 3 4 5 6 7

40 After an argument, I feel very lonely

1 2 3 4 5 6 7

41 In my relationships with others, I am very concerned about what they can give to me

1 2 3 4 5 6 7

42 I rarely think about my family

1 2 3 4 5 6 7

43 Very frequently, my feelings toward someone close to me vary: there are times when I feel completely angry and other times when I feel all-loving towards that person

1 2 3 4 5 6 7

44 I grew up in an extremely close family

1 2 3 4 5 6 7

45 I am satisfied with myself and my accomplishments

1 2 3 4 5 6 7

46 I tend to be critical of myself

1 2 3 4 5 6 7

47 Being alone doesn't bother me at all

1 2 3 4 5 6 7

48 I very frequently compare myself to standards or goals

1 2 3 4 5 6 7

The TMMS (Trait Meta-Mood Scale)

Instructions: Different people experience their moods differently. Please describe your general experience of moods. Please circle a number from 1 (strongly disagree) to 5 (strongly agree) for each of the following items.

1 I pay a lot of attention to how I feel
1 2 3 4 5

2 I am usually very clear about my feelings
1 2 3 4 5

3 People would be better off if they felt less and thought more
1 2 3 4 5

4 My beliefs and opinions always seem to change depending on how I feel
1 2 3 4 5

5 No matter how badly I feel, I try to think about pleasant things
1 2 3 4 5

6 Feelings are a weakness humans have
1 2 3 4 5

7 Sometimes I can't tell what my feelings are
1 2 3 4 5

8 I never give in to my feelings
1 2 3 4 5

9 I don't pay much attention to my feelings
1 2 3 4 5

10 Although I am sometimes sad, I have a mostly optimistic outlook
1 2 3 4 5

11 I usually know my feelings about a matter
1 2 3 4 5

12 I don't usually care much about what I'm feeling
1 2 3 4 5

13 I can't make sense out of my feelings
1 2 3 4 5

14 The best way for me to handle my feelings is to experience them to the fullest
1 2 3 4 5

15 When I am upset I realize that the "good things in life" are illusions
1 2 3 4 5

16 I often think about my feelings
1 2 3 4 5

17 I feel at ease about my emotions
1 2 3 4 5

18 One should never be guided by emotions
1 2 3 4 5

19 I am rarely confused about how I feel
1 2 3 4 5

20 When I become upset I remind myself of all the pleasures in life
1 2 3 4 5

21 I am often aware of my feelings on a matter
1 2 3 4 5

22 It is usually a waste of time to think about your emotions
1 2 3 4 5

23 I believe in acting from the heart
1 2 3 4 5

24 I almost always know exactly how I am feeling
1 2 3 4 5

25 Although I am sometimes happy, I have a mostly pessimistic outlook
1 2 3 4 5

26 Feelings give direction to life
1 2 3 4 5

27 I am usually confused about how I feel
1 2 3 4 5

28 I don't think it's worth paying attention to your emotions or moods
1 2 3 4 5

29 I can never tell how I feel
1 2 3 4 5

30 I try to think good thoughts no matter how badly I feel
1 2 3 4 5

The EIS-R (Emotional Intelligence Scale Revised)

Please indicate on a scale from 1 = strongly disagree to 5 = strongly agree, the extent to which the following items describe you

1 - 2 - 3 - 4 - 5 . . . . . I find it hard to understand the non-verbal messages of other people

1 - 2 - 3 - 4 - 5 . . . . . By looking at their facial expressions, I recognize the emotions people are experiencing

1 - 2 - 3 - 4 - 5 . . . . . I am aware of the non-verbal messages I send to others

1 - 2 - 3 - 4 - 5 . . . . . I can tell how people are feeling by listening to the tone of their voice

1 - 2 - 3 - 4 - 5 . . . . . I know what other people are feeling just by looking at them

1 - 2 - 3 - 4 - 5 . . . . . I am aware of the non-verbal messages other people send

The MEES (original items of the Meta_Emotional Experience Survey)

The following is a list of possible thoughts and experiences that may happen when you start feeling an emotion. Please circle a number for each emotion (angry, sad, happy) that indicates your level of agreement with each item from 1 = rarely to 5 = often

	ANGRY	SAD	HAPPY
1	This emotion makes me feel alive		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
2	I get irritated with others who insist on feeling this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
3	I would be embarrassed to show this emotion		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
4	I try to analyze why I'm feeling this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
5	Showing this emotion is necessary in order to be a well-rounded human being		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
6	I get annoyed at myself for feeling this Way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
7	I just get quiet and withdraw when others express this emotion		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
8	This is a human emotion that just happens naturally		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
9	I try to stifle this emotion		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
10	This emotion is trivial and unimportant		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
11	I feel weak when I feel this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
12	I find myself getting caught up in other's emotions when they feel this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
13	I feel invigorated when I express this emotion		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
14	I try to ignore this feeling and just get on with life		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
15	I feel indifferent towards feeling this way; it just comes upon me		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
16	I will lose control if I allow myself to experience this feeling		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
17	I try to listen to and understand others when they feel this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
18	I feel frustrated that I still express this emotion at times		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
19	I try to keep this feeling to myself and not let it show		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
20	I feel okay expressing this emotion when appropriate		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5

The MEES (remaining items used for statistical analysis in this study)

The following is a list of possible thoughts and experiences that may happen when you start feeling an emotion. Please circle a number for each emotion (angry, sad, happy) that indicates your level of agreement with each item from 1 = rarely to 5 = often

	ANGRY	SAD	HAPPY
5	Showing this emotion is necessary in order to be a well-rounded human being		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
6	I get annoyed at myself for feeling this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
8	This is a human emotion that just happens naturally		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
9	I try to stifle this emotion		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
11	I feel weak when I feel this way		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
14	I try to ignore this feeling and just get on with life		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
18	I feel frustrated that I still express this emotion at times		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5
19	I try to keep this feeling to myself and not let it show		
	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5

The I I P (Inventory of Interpersonal Problems Revised)

Listed below are a variety of common problems that people report in relating to other people. Please read each item and consider whether that problem has been a problem for you with respect to any significant person in your life. Using the following scale, select the number that describes how distressing that problem has been and circle a number from 0 (not at all distressing) to 4 (extremely distressing)

1.) I am too sensitive to rejection
- 0 - - 1 - - 2 - - 3 - - 4 -

2.) It is hard for me to take instructions from people who have authority over me
- 0 - - 1 - - 2 - - 3 - - 4 -

3.) I argue with other people too much
- 0 - - 1 - - 2 - - 3 - - 4 -

4.) I worry too much about disappointing other people
- 0 - - 1 - - 2 - - 3 - - 4 -

5.) It is hard for me to socialize with other people
- 0 - - 1 - - 2 - - 3 - - 4 -

6.) I am too sensitive to criticism
- 0 - - 1 - - 2 - - 3 - - 4 -

7.) It is hard for me to do what another person wants me to do
- 0 - - 1 - - 2 - - 3 - - 4 -

8.) I fight with other people too much
- 0 - - 1 - - 2 - - 3 - - 4 -

9.) I try to please other people too much
- 0 - - 1 - - 2 - - 3 - - 4 -

10.) It is hard for me to feel comfortable around other people
- 0 - - 1 - - 2 - - 3 - - 4 -

11.) I feel too anxious when I am involved with another person
- 0 - - 1 - - 2 - - 3 - - 4 -

12.) It is hard for me to accept another person's authority over me
- 0 - - 1 - - 2 - - 3 - - 4 -

13.) I get irritated or annoyed too easily
- 0 - - 1 - - 2 - - 3 - - 4 -

14.) I worry too much about other people's reactions to me
- 0 - - 1 - - 2 - - 3 - - 4 -

15.) It is hard for me to be self-confident when I am with other people
- 0 - - 1 - - 2 - - 3 - - 4 -

16.) It is hard for me to ignore criticism from other people
- 0 - - 1 - - 2 - - 3 - - 4 -

17.) It is hard for me to be supportive of another person's goals in life
- 0 - - 1 - - 2 - - 3 - - 4 -

18.) I lose my temper too easily
- 0 - - 1 - - 2 - - 3 - - 4 -

19.) I am influenced too much by another person's thoughts and feelings
- 0 - - 1 - - 2 - - 3 - - 4 -

20.) It is hard for me join in on groups
- 0 - - 1 - - 2 - - 3 - - 4 -

21.) I feel attacked by other people too much
- 0 - - 1 - - 2 - - 3 - - 4 -

22.) It is hard for me to get along with people who have authority over me
- 0 - - 1 - - 2 - - 3 - - 4 -

23.) I am too aggressive toward other people
- 0 - - 1 - - 2 - - 3 - - 4 -

24.) It is hard for me to be assertive without worrying about hurting the other person's feelings
- 0 - - 1 - - 2 - - 3 - - 4 -

25.) I feel embarrassed in front of other people too much
- 0 - - 1 - - 2 - - 3 - - 4 –

The DUKE (Duke Mental Health Scale)

During the past week how much trouble have you had with nervousness
None ____ / Some ____ / A lot ____

During the past week how much trouble have you had with feeling depressed or sad
None ____ / Some ____ / A lot ____

How well does the following statement describe you . . . "I give up too easily"
Yes, describes me exactly ____ / Somewhat describes me ____ / No, doesn't describe me at all ____

How well does the following statement describe you . . . "I have difficulty concentrating"
Yes, describes me exactly ____ / Somewhat describes me ____ / No, doesn't describe me at all ____

How well does the following statement describe you . . . "I like who I am"
Yes, describes me exactly ____ / Somewhat describes me ____ / No, doesn't describe me at all ____

Table 1 *Frequency Table*

Variables	Divisions	N	%
Sex	Female	236	73.3 %
	Male	86	26.7 %
Participant's relationship status	Married / common-law	41	12.8 %
	Re-married	1	0.3 %
	Separated / divorced	5	1.6 %
	Widowed	0	0 %
	Single	274	85.4 %
Parent's relationship status	Married / common-law	243	75.9 %
	Re-married	21	6.6 %
	Separated / divorced	37	11.6 %
	Widowed	15	4.7 %
	Single	4	1.3 %
Education	Undergraduate student	222	68.9 %
	College diploma	16	5.0 %
	Bachelor's degree	77	23.9 %
	Master's degree	6	1.9 %
	PhD or MD	1	0.3 %
Ethnicity	Caucasian	268	83.8 %
	Native North American	7	2.2 %
	African-Canadian	4	1.3 %
	Asian-Canadian	30	9.4 %
	Indo-Canadian	8	2.5 %
	Latin-Canadian	3	0.9 %

Table 2 *Means, Standard Deviations, and Coefficient Alpha Reliabilities*

Variables	Mean	Standard Deviation	Variance	Alpha
MOPS-MC mother's over control	12.1	2.72	7.549	0.68
MOPS-MI mother's indifference	22.7	2.19	4.186	0.76
MOPS-MA mother's abusiveness	18.9	1.94	3.599	0.68
MOPS-MT mother's total parenting	53.6	5.43	28.207	0.81
MOPS-FC father's over control	12.8	2.58	6.608	0.61
MOPS-FI father's indifference	21.8	3.69	14.220	0.89
MOPS-FA father's abusiveness	18.3	3.27	10.700	0.89
MOPS-FT father's total parenting	52.9	7.98	64.991	0.90
FEQ-NE negative family expressiveness	57.3	18.53	344.744	0.93
FEQ-PE positive family expressiveness	76.0	19.43	379.612	0.90
MDEQ-SC self criticism	114.1	18.69	349.932	0.81
TMMS-C clarity of emotions	38.9	6.95	47.837	0.86
TMMS-A attention to emotions	50.8	6.73	45.123	0.82
TMMS-R emotional repair	22.0	4.42	19.307	0.79
EIS-R revised emotional appraisal	26.6	4.24	17.658	0.78
NENR negative responses to negative emotions	36.4	9.58	92.900	0.83
PENR negative responses to negative emotions	7.6	2.78	7.366	0.72
AEHR all emotions are human responses	23.7	4.15	16.271	0.75
IIP-IS interpersonal sensitivity	9.1	3.91	15.288	0.75
IIP-IA interpersonal ambivalence	5.3	3.81	14.558	0.81
IIP-AH interpersonal aggressiveness / hostility	6.5	4.35	19.135	0.84
IIP-NA interpersonal need for approval	10.6	4.47	19,650	0.82
IIP-LS interpersonal lack of sociability	6.9	4.8	23.035	0.87
IIP-T total interpersonal problems	38.3	16.26	262.027	0.92
DUKE mental health	8.3	1.96	3.765	0.64
AGE participant age	22.8	5.17		NA
INCOME family income growing up	5.0	1.26	1.622	NA
MOOD current mood	5.9	1.21	1.404	NA
MDEQ-DEP dependency	130.9	16.1	260.8	0.75

Means, Standard Deviations, and Coefficient Alpha Reliabilities continued

Note: MOPS-MC = mother's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = mother's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = mother's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = mother's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MC = father's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = father's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = father's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = father's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); FEQ-NE = negative family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), FEQ-PE = positive family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), MDEQ-SC = McGill revision of the Depressive Experiences Questionnaire self-criticism scale (Santor, Zuroff, & Fielding, 1997); TMMS-C = clarity of emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-A = attention to emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-R = emotional repair scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); EIS-R = appraisal of other's emotions scale (Austin, Saklofske, Huang, & McKenney, 2004); NENR = negative meta-emotional responses to negative emotions scale (Myers, 2003); PENR = negative meta-emotional responses to positive emotions scale (Myers, 2003); AEHR = meta-emotional view of emotions as human responses scale (Myers, 2003); IIP-IS = interpersonal sensitivity subscale (Kim & Pilkonis, 1999); IIP-IA = interpersonal ambivalence subscale (Kim & Pilkonis, 1999); IIP-AH = interpersonal aggression / hostility subscale (Kim & Pilkonis, 1999); IIP-NS = need for social approval subscale (Kim & Pilkonis, 1999); IIP-LS = lack of sociability sub-scale (Kim & Pilkonis, 1999); IIP-T = total interpersonal problems (distress) scale (Kim & Pilkonis, 1999); DUKE = mental health scale (Parkerson, Broadhead, & Tse, 1990); AGE = participant age; INCOME = participant's perception of family income (poor to rich); MOOD = participant's current mood (sad to happy); SEX = participant sex; RELATE = participant's relationship status; PAR-REL = parent's relationship status; EDUCATE = participant education level; ETH-BAK = participant ethnic background; MDEQ-DEP = McGill revision of the Depressive Experiences Questionnaire dependency scale (Santor, Zuroff, & Fielding, 1997).

Table 3 *Tests of Univariate Normality*

Variables	Skewness	SE of Skew	Kurtosis	SE of Kurtosis
MOPS-MC	-.872	.137	.291	.272
MOPS-MI	-3.204	.137	14.362	.272
MOPS-MA	-3.887	.137	11.803	.272
MOPS-MT	-1.947	.137	5.392	.272
MOPS-FC	-1.036	.137	.835	.274
MOPS-FI	-2.447	.137	6.130	.274
MOPS-FA	-2.412	.137	5.430	.274
MOPS-FT	-2.071	.137	4.393	.274
FEQ-NE	.172	.137	-.563	.272
FEQ-PE	-.607	.137	-.251	.272
MDEQ-SC	.243	.137	.008	.273
TMMS-C	-.227	.137	.096	.272
TMMS-A	-1.041	.137	3.025	.272
TMMS-R	-.544	.137	.175	.272
EIS-R	-.675	.137	.991	.274
NENR	-.216	.137	-.392	.273
PENR	2.678	.137	9.396	.273
AEHR	-.156	.137	-.662	.273
IIP-IS	-.002	.137	-.419	.273
IIP-IA	.660	.137	.019	.273
IIP-AH	.481	.137	-.232	.273
IIP-NA	-.017	.137	-.626	.273
IIP-LS	.376	.137	-.700	.273
IIP-T	.227	.137	-.247	.273
DUKE	.520	.137	-.037	.272
AGE	2.488	.137	7.668	.272
INCOME	-.528	.137	.182	.273
MOOD	-.520	.137	.525	.273
SEX	1.058	.136	-.887	.271
RELATE	-2.106	.136	2.530	.271
PAR-REL	1.852	.136	2.370	.272
EDUCATE	1.118	.136	-.257	.271
ETH-BAK	2.261	.136	3.755	.272
MDEQ-DEP	-.074	.137	-.223	.273

Tests of Univariate Normality continued

Note: MOPS-MC = mother's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = mother's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = mother's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = mother's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MC = father's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = father's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = father's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = father's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); FEQ-NE = negative family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), FEQ-PE = positive family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), MDEQ-SC = McGill revision of the Depressive Experiences Questionnaire self-criticism scale (Santor, Zuroff, & Fielding, 1997); TMMS-C = clarity of emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-A = attention to emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-R = emotional repair scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); EIS-R = appraisal of other's emotions scale (Austin, Saklofske, Huang, & McKenney, 2004); NENR = negative meta-emotional responses to negative emotions scale (Myers, 2003); PENR = negative meta-emotional responses to positive emotions scale (Myers, 2003); AEHR = meta-emotional view of emotions as human responses scale (Myers, 2003); IIP-IS = interpersonal sensitivity subscale (Kim & Pilkonis, 1999); IIP-IA = interpersonal ambivalence subscale (Kim & Pilkonis, 1999); IIP-AH = interpersonal aggression / hostility subscale (Kim & Pilkonis, 1999); IIP-NS = need for social approval subscale (Kim & Pilkonis, 1999); IIP-LS = lack of sociability sub-scale (Kim & Pilkonis, 1999); IIP-T = total interpersonal problems (distress) scale (Kim & Pilkonis, 1999); DUKE = mental health scale (Parkerson, Broadhead, & Tse, 1990); AGE = participant age; INCOME = participant's perception of family income (poor to rich); MOOD = participant's current mood (sad to happy); SEX = participant sex; RELATE = participant's relationship status; PAR-REL = parent's relationship status; EDUCATE = participant education level; ETH-BAK = participant ethnic background; MDEQ-DEP = McGill revision of the Depressive Experiences Questionnaire dependency scale (Santor, Zuroff, & Fielding, 1997).

Table 4 *Principle Components Analysis with Varimax Rotation of the Remaining Items of the MEES*

MEES item numbers	I NENR	II AEHR	III PENR
Anger 5	-0.08	**0.76**	0.14
Anger 6	**0.55**	-0.06	0.05
Anger 8	-0.14	**0.72**	0.00
Anger 9	**0.59**	-0.21	-0.07
Anger 11	**0.50**	-0.11	0.11
Anger 14	**0.59**	-0.12	-0.05
Anger 18	**0.58**	-0.06	0.24
Anger 19	**0.57**	-0.15	-0.01
Sadness 5	-0.05	**0.73**	0.03
Sadness 6	**0.65**	0.15	0.13
Sadness 8	-0.11	**0.71**	-0.09
Sadness 9	**0.63**	-0.01	0.01
Sadness 11	**0.53**	0.05	0.01
Sadness 14	**0.63**	-0.04	0.01
Sadness 18	**0.65**	0.10	0.28
Sadness 19	**0.63**	0.01	0.02
Happiness 5	0.06	**0.45**	-0.15
Happiness 6	0.08	0.01	**0.64**
Happiness 8	-0.01	**0.54**	-0.23
Happiness 9	0.08	-0.06	**0.70**
Happiness 11	-0.06	-0.07	**0.61**
Happiness 14	0.03	-0.01	**0.59**
Happiness 18	0.10	-0.06	**0.68**
Happiness 19	0.12	-0.10	**0.63**
Initial Eigen	4.73	2.65	2.47
% of Variance	17.98 %	11.53 %	11.52 %

Table 5 *Correlation Table*

	Variables	1.)	2.)	3.)	4.)	5.)	6.)	7.)	8.)
1.)	MOPS-MC	– –							
2.)	MOPS-M1	.24**	– –						
3.)	MOPS-MA	.52**	.61**	– –					
4.)	MOPS-MT	.78**	.74**	.87**	– –				
5.)	MOPS-FC	.36**	.19**	.16**	.31**	– –			
6.)	MOPS-FI	.13*	.50**	.31**	.37**	.33**	– –		
7.)	MOPS-FA	.14*	.36**	.32**	.33**	.53**	.73**	– –	
8.)	MOPS-FT	.23**	.44**	.33**	.41**	.69**	.87**	.92**	– –
9.)	MDEQ-SC	-.31**	-.25**	-.28**	-.36**	-.24**	-.25**	-.24**	-.29**
10.)	TMMS-C	.16*	.10	.07	.14*	.07	.00	-.02	.01
11.)	TMMS-A	.13*	.16**	.14*	.18**	-.02	.02	-.02	-.00
12.)	TMMS-R	.23**	.15**	.21**	.25**	.20**	.16**	.23**	.23**
13.)	EIS-R	.10	.09	.09	.12*	.11	.07	.06	.09
14.)	NENR	-.21**	-.06	-.12*	-.17**	-.12*	-.07	-.07	-.10
15.)	PENR	-.19**	-.30**	-.23**	-.30**	-.07	-.15**	-.13*	-.15*
16.)	AEHR	-.08	.07	.03	-.00	.04	.03	-.01	-.00
17.)	FEQ-NE	-.39**	-.27**	-.43**	-.46**	-.37**	-.40**	-.44**	-.48**
18.)	FEQ-PE	.28**	.43**	.41**	.46**	.23**	.41**	.36**	.41**
19.)	IIP-IS	-.27**	-.14*	-.20**	-.26**	-.12*	-.12*	-.14*	-.15**
20.)	IIP-IA	-.20**	-.18**	-.23**	-.26**	-.13*	-.17**	-.17**	-.19**
21.)	IIP-AH	-.16**	-.17**	-.15**	-.20**	-.12*	-.11	-.08	-.12*
22.)	IIP-NA	-.19**	-.10	-.11	-.17**	-.10	-.06	-.08	-.09
23.)	IIP-LS	-.27**	-.22**	-.23**	-.30**	-.13*	-.14*	-.15**	-.17**
24.)	IIP-T	-.28**	-.21**	-.24**	-.31**	-.16**	-.15**	-.16**	-.19**
25.)	DUKE	-.26**	-.14*	-.19**	-.25**	-.27**	-.12*	-.16**	-.21**
26.)	AGE	-.05	-.09	-.06	-.08	-.02	-.23**	-.18**	-.19**
27.)	INCOME	.09	.14*	.17**	.16**	.18**	.33**	.28**	.33**
28.)	MOOD	.19**	.18**	.19**	.24**	.18**	.21**	.21**	.24**
29.)	SEX	-.04	-.10	-.04	-.07	.03	-.10	-.08	-.07
30.)	RELATE	.00	.08	.08	.06	-.09	.13*	.06	.06
31.)	PAR-REL	-.07	-.15**	-.09	-.12*	-.04	-.31**	-.18**	-.23**
32.)	EDCATE	.02	-.01	.00	.00	.06	-.06	-.01	-.01
33.)	ETH-BAK	-.16**	-.06	-.08	-.13*	-.10	.01	-.01	-.03
34.)	MDEQ-DEP	-.02	.15**	.07	.08	.02	.10	.01	.06

Table 5 *Correlation Table continued*

	Variables	9.)	10.)	11.)	12.)	13.)	14.)	15.)	16.)
1.)	MOPS-MC								
2.)	MOPS-M1								
3.)	MOPS-MA								
4.)	MOPS-MT								
5.)	MOPS-FC								
6.)	MOPS-FI								
7.)	MOPS-FA								
8.)	MOPS-FT								
9.)	MDEQ-SC	– –							
10.)	TMMS-C	-.49**	– –						
11.)	TMMS-A	-.15**	.23**	– –					
12.)	TMMS-R	-.57**	.39**	.13*	– –				
13.)	EIS-R	-.26**	.43**	.41**	.21**	– –			
14.)	NENR	.36**	-.35**	-.16**	-.13*	-.14*	– –		
15.)	PENR	.31**	-.25**	-.21**	-.22**	-.26**	.20**	– –	
16.)	AEHR	.11*	.07	.24**	-.08	.20**	-.15**	-.12*	– –
17.)	FEQ-NE	.53**	-.27**	-.01	-.40**	-.12*	.22**	.19**	.16**
18.)	FEQ-PE	-.29**	.13*	.30**	.37**	.17**	-.06	-.19**	.05
19.)	IIP-IS	.52**	-.36**	.05	-.35**	-.21**	.35**	.24**	.08
20.)	IIP-IA	.44**	-.22**	-.11	-.34**	-.24**	.18**	.30**	.06
21.)	IIP-AH	.50**	-.35**	-.14*	-.36**	-.30**	.20**	.32**	-.01
22.)	IIP-NA	.45**	-.33**	.06	-.22**	-.15**	.37**	.14*	.10
23.)	IIP-LS	.43**	-.39**	-.14*	-.37**	-.34**	.27**	.31**	.02
24.)	IIP-T	.61**	-.44**	-.08	-.43**	-.32**	.37**	.35**	.06
25.)	DUKE	.62**	-.42**	-.03	-.50**	-.23**	.34**	.27**	-.01
26.)	AGE	.02	.20**	.03	.00	.03	-.13*	.09	-.03
27.)	INCOME	-.02	-.04	.07	.08	.08	-.01	-.12*	.06
28.)	MOOD	-.40**	.26**	.01	.43**	.13*	-.16**	-.21**	-.00
29.)	SEX	.14*	.03	-.28**	-.04	-.13*	-.06	.08	-.04
30.)	RELATE	.05	-.16**	-.12*	-.01	-.10	.09	-.09	-.02
31.)	PAR-REL	.13*	-.08	.07	-.10	.06	-.05	.03	.08
32.)	EDCATE	.01	.15**	.05	-.01	.06	-.12*	.01	.10
33.)	ETH-BAK	.04	-.12*	-.12*	-.01	-.12*	.08	.28*	-.06
34.)	MDEQ-DEP	-.01	-.20**	.21**	-.05	.02	.33**	.04	.06

Table 5 *Correlation Table continued*

	Variables	17.)	18.)	19.)	20.)	21.)	22.)	23.)	24.)
1.)	MOPS-MC								
2.)	MOPS-M1								
3.)	MOPS-MA								
4.)	MOPS-MT								
5.)	MOPS-FC								
6.)	MOPS-FI								
7.)	MOPS-FA								
8.)	MOPS-FT								
9.)	MDEQ-SC								
10.)	TMMS-C								
11.)	TMMS-A								
12.)	TMMS-R								
13.)	EIS-R								
14.)	NENR								
15.)	PENR								
16.)	AEHR								
17.)	FEQ-NE	– –							
18.)	FEQ-PE	-.35**	– –						
19.)	IIP-IS	.36**	-.18**	– –					
20.)	IIP-IA	.36**	-.15**	.47**	– –				
21.)	IIP-AH	.35**	-.09	.48**	.51**	– –			
22.)	IIP-NA	.29**	-.08	.74**	.29**	.37**	– –		
23.)	IIP-LS	.30**	-.22**	.63**	.40**	.39**	.53**	– –	
24.)	IIP-T	.43**	-.19**	.87**	.68**	.72**	.77**	.79**	– –
25.)	DUKE	.35**	-.21**	.48**	.30**	.37**	.48**	.47**	.56**
26.)	AGE	-.03	-.19**	.01	.02	.03	-.08	.06	.01
27.)	INCOME	-.05	.26**	.00	.00	-.06	-.00	-.13*	-.05
28.)	MOOD	-.28**	.31**	-.32**	-.09	-.24**	-.27**	-.30**	-.33**
29.)	SEX	.04	-.26**	-.04	.09	.05	-.08	.07	.02
30.)	RELATE	-.01	.06	.03	.03	.02	.01	-.01	.01
31.)	PAR-REL	.12*	-.14*	.07	.08	.02	.10	.09	.10
32.)	EDCATE	-.06	-.10	-.07	-.04	-.07	-.04	-.01	-.05
33.)	ETH-BAK	.07	-.10	.05	.06	.12*	.05	.12*	.11
34.)	MDEQ-DEP	.07	.28**	.42**	.04	.06	.51**	.26**	.34**

Table 5 *Correlation Table continued*

	Variables	25.)	26.)	27.)	28.)	29.)	30.)	31.)	32.)
1.)	MOPS-MC								
2.)	MOPS-M1								
3.)	MOPS-MA								
4.)	MOPS-MT								
5.)	MOPS-FC								
6.)	MOPS-FI								
7.)	MOPS-FA								
8.)	MOPS-FT								
9.)	MDEQ-SC								
10.)	TMMS-C								
11.)	TMMS-A								
12.)	TMMS-R								
13.)	EIS-R								
14.)	NENR								
15.)	PENR								
16.)	AEHR								
17.)	FEQ-NE								
18.)	FEQ-PE								
19.)	IIP-IS								
20.)	IIP-IA								
21.)	IIP-AH								
22.)	IIP-NA								
23.)	IIP-LS								
24.)	IIP-T								
25.)	DUKE	– –							
26.)	AGE	-.01	– –						
27.)	INCOME	-.05	-.24**	– –					
28.)	MOOD	-.47**	-.14*	.26**	– –				
29.)	SEX	-.03	.19**	.01	-.05	– –			
30.)	RELATE	-.04	-.49**	.13*	.08	-.02	– –		
31.)	PAR-REL	.10	.02	-.21**	-.11*	-.04	-.04	– –	
32.)	EDCATE	-.12*	.52**	-.11*	-.10	.16**	-.25**	.04	– –
33.)	ETH-BAK	.15*	-.06	-.14*	-.12*	-.02	.11	-.03	.00
34.)	MDEQ-DEP	.25**	-.26**	.03	-.10	-.32**	.04	.04	-.16**

Table 5 *Correlation Table continued*

Note: MOPS-MC = mother's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = mother's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = mother's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = mother's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MC = father's over-controlling parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MI = father's indifferent (cold) parenting style subscale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MA = father's abusive parenting style subscale ((Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); MOPS-MT = father's total (overall) parenting style scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm & Austin, 1997); FEQ-NE = negative family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), FEQ-PE = positive family expressiveness scale (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), MDEQ-SC = McGill revision of the Depressive Experiences Questionnaire self-criticism scale (Santor, Zuroff, & Fielding, 1997); TMMS-C = clarity of emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-A = attention to emotions scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); TMMS-R = emotional repair scale (Salovey, Mayer, Goldman, Turvey, Palfai, 1995); EIS-R = appraisal of other's emotions scale (Austin, Saklofske, Huang, & McKenney, 2004); NENR = negative meta-emotional responses to negative emotions scale (Myers, 2003); PENR = negative meta-emotional responses to positive emotions scale (Myers, 2003); AEHR = meta-emotional view of emotions as human responses scale (Myers, 2003); IIP-IS = interpersonal sensitivity subscale (Kim & Pilkonis, 1999); IIP-IA = interpersonal ambivalence subscale (Kim & Pilkonis, 1999); IIP-AH = interpersonal aggression / hostility subscale (Kim & Pilkonis, 1999); IIP-NS = need for social approval subscale (Kim & Pilkonis, 1999); IIP-LS = lack of sociability sub-scale (Kim & Pilkonis, 1999); IIP-T = total interpersonal problems (distress) scale (Kim & Pilkonis, 1999); DUKE = mental health scale (Parkerson, Broadhead, & Tse, 1990); AGE = participant age; INCOME = participant perception of family income (poor to rich); MOOD = current participant mood (sad to happy); SEX = participant gender (female or male); RELATE = participant's relationship status (married or not married); PAR-REL = participant's parent's relationship status (married or not married); EDCATE = participant's level of education; ETH-BAK participant's ethnic background (Caucasian or non[Caucasian); MDEQ-DEP = McGill revision of the Depressive Experiences Questionnaire dependency scale (Santor, Zuroff, & Fielding, 1997);
* = p's < 0.05; ** = p's < 0.01

Table 6 *Macro Model Non-Standardized Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients / Effects*

Variables	1	2	3	4	5	6
1						
2						
3						
4	1.265*	.803*	-.474			
5	-1.303*	-.646*	-9.607*			
6			4.691*	.537*	-.073	
7			1.847*			-.191*
8			-3.540*	.056*	.093*	.000
9			.750	-.011	.052*	-.106*
10			-.405			-.011
11			-4.083			.774*
12			-.243			.036*

Table 6 *Macro Model Non-Standardized Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients / Effects continued*

Variables	7	8	9	10	11	12
1						
2						
3						
4						
5						
6						
7						
8	.227*					
9	.082*					
10	.222*	.196*				
11	-.033	.129	.353	-.493*		
12	-.024	.016	-.062*	-.017		

Note: 1 = mother's anomalous parenting style; 2 = father's anomalous parenting style; 3 = participant male gender; 4 = negative expressiveness within the family of origin; 5 = positive expressiveness within the family of origin; 6 = self-criticism; 7 = clarity of one's emotions; 8 = paying attention to one's emotions; 9 = the ability to repair negative emotions; 10 = the ability to discern other's emotions, 11 = interpersonal problems, 12 = mental health problems; * = $p < 0.05$

Table 7 *Macro Model Non-Standardized Maximum Likelihood Estimates of Phi (φ) and Psy (ψ) Error Coefficients*

Variables	1	2	3	4	5	6
1	26.796*					
2	17.117*	62.097*				
3			0.184*			
4				213.465*		
5					239.794*	
6						222.135*
7						
8						
9						
10						
11						
12						

Table 7 *Macro Model Non-Standardized Maximum Likelihood Estimates of Phi (φ) and Psy (ψ) Error Coefficients continued*

Variables	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						
7	33.873*					
8		35.330*				
9			10.519*			
10				11.472*		
11					58.465*	
12						0.972*

Note: 1 = mother's anomalous parenting style; 2 = father's anomalous parenting style; 3 = participant male gender; 4 = negative expressiveness within the family of origin; 5 = positive expressiveness within the family of origin; 6 = self-criticism; 7 = clarity of one's emotions; 8 = paying attention to one's emotions; 9 = the ability to repair negative emotions; 10 = the ability to discern other's emotions, 11 = interpersonal problems, 12 = mental health problems; * = $p < 0.05$

Table 8 *Macro Model Standardized Solutions of Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients*

Variables	1	2	3	4	5	6
1						
2						
3						
4	.360*	.348*	-.011			
5	-.357*	-.270*	-.218*			
6			.110*	.536*	-.076	
7			.117*			-.513*
8			-.230*	.153*	.265*	-.001
9			.075	-.047	.228*	-.454*
10			-.042			-.049
11			.111			.893*
12			-.076			.485*

Table 8 *Macro Model Standardized Solutions of Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients continued*

Variables	7	8	9	10	11	12
1						
2						
3						
4						
5						
6						
7						
8	.232*					
9	.131*					
10	.367*	.317*				
11	-.014	.054	.095	-.128*		
12	-.117	.079	-.192*	-.051		

Note: 1 = mother's anomalous parenting style; 2 = father's anomalous parenting style; 3 = participant male gender; 4 = negative expressiveness within the family of origin; 5 = positive expressiveness within the family of origin; 6 = self-criticism; 7 = clarity of one's emotions; 8 = paying attention to one's emotions; 9 = the ability to repair negative emotions; 10 = the ability to discern other's emotions, 11 = interpersonal problems, 12 = mental health problems; * = $p < 0.05$

Table 9 *Micro Model Non-Standardized Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients / Effects*

Variables	1	2	3	4	5	6	7
5	-.258	-.220	-1.346*	.133			
6	-.621*	-.577	-.344	.218*			
7	-.258	-.351	-.446	.257*			
8	.186	-.002	-.364	.361*			
9	-1.055*	-3.000*	-.016	.789*			
10	-.657	-1.220*	.218	.655*			
11	-.026	2.569	2.110	2.684*	1.360*	-.897	2.866*
12	-9.317*	-2.154	-1.126	1.842*	-.799	-1.930*	-1.276
13	4.335	.620	-.994	.338			
14	2.075*	.392	-2.190*	-.373			
15	-2.766*	2.140*	-1.787	.094			
16	.648	-.101	-.769	.088			
17	-.463	1.099*	-.822	.287			
18	-2.902*	-3.099*	-.367	-.515			
19	.413	-.126	2.144*	-.158			
20	-1.047	.643	.466	.428			
21	-1.215*	-.421	-.052	.000			
22	-.283	.348	.462	.201			
23	.029	-.349	1.166	-.047			
24	-1.846*	-.419	.268	-.013			
25	-.194	-.232	.923	-.358			
26	-.327	-.054	.716*	-.033			
27	-.178	.034	-.335	.225*			

Table 9 *Micro Model Non-Standardized Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients / Effects continued*

Variables	8	9	10	11	12	13	14
5							
6							
7							
8							
9							
10							
11	.870	.927	1.125[a]				
12	-.160	-.546	-.528				
13				.497*	-.101		
14						-.188*	
15				.044	.082*	-.050*	
16				-.016	.049*	-.102*	.096*
17				-.004	.000	-.013	.209*
18				.051	.017	.176*	-.354*
19				.005	.000	.024*	-.033
20				.026	.031*	.090*	.479*
21						.181*	-.014
22						.095*	.050
23						.088*	-.053
24						.228*	-.033
25						.158*	-.043
26						.052*	-.026
27						-.014*	.014

Table 9 *Micro Model Non-Standardized Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients / Effects continued*

Variables	15	16	17	18	19	20	21
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15						.377*	
16							
17	.181*	.011					
18	-.169	.375*					
19	-.039	-.051					
20		-.164					
21	.089*	.131	-.064				
22	-.082*	-.079	-.086				
23	-.015	-.107	-.114				
24	.084	.356*	.008				
25	.017	.047	-.165*				
26	.026	-.083*	-.022				
27	-.022*	.070*	-.013				

Note: 1 = participant male gender; 2 = parent's non-married marital status; 3 = non-Caucasian ethnic background; 4 = "poor" family income; 5 = mother's over-controlling parenting style; 6 = mother's indifferent parenting style; 7 = mother's abusive parenting style; 8 = father's over-controlling parenting style; 9 = father's indifferent parenting style; 10 = father's abusive parenting style; 11 = negative expressiveness within the family of origin; 12 = positive expressiveness within the family of origin; 13 = self-criticism; 14 = clarity of one's emotions; 15 = paying attention to one's emotions; 16 = the ability to repair negative emotions; 17 = the ability to discern other's emotions, 18 = negative meta-emotional responses to negative emotions; 19 = negative meta-emotional responses to positive emotions; 20 = meta-emotional view of emotions as human responses; 21 = interpersonal sensitivity; 22 = interpersonal ambivalence; 23 = interpersonal aggressiveness; 24 = need for social approval; 25 = lack of sociability; 26 = mental health problems; 27 = current "happy" mood;

* = $p < 0.05$; [a] indicates a near significant trend

Table 10 *Micro Model Non-Standardized Maximum Likelihood Estimates of Phi (ϕ) and Psy (ψ) Error Coefficients*

Variables	1	2	3	4	5	6	7
1	.184*						
2		.174*					
3			.129*				
4		-.141*	-.081*	1.544*			
5					6.853*		
6					1.166*	3.718*	
7					2.666*	1.995*	3.217*
8					2.295*	.789*	.599*
9					.792	2.963*	1.495*
10					1.026*	1.655*	1.512*
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

Table 10 *Micro Model Non-Standardized Maximum Likelihood Estimates of Phi (ϕ) and Psy (ψ) Error Coefficients continued*

Variables	8	9	10	11	12	13	14
1							
2							
3							
4							
5							
6							
7							
8	6.032*						
9	2.692*	10.161*					
10	4.100*	7.023*	9.008*				
11				194.587*			
12				-27.993*	230.578*		
13						227.926*	
14							32.992*
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

Table 10 *Micro Model Non-Standardized Maximum Likelihood Estimates of Phi (ϕ) and Psy (ψ) Error Coefficients continued*

Variables	15	16	17	18	19	20	21
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	33.198*						
16		10.468*					
17			11.238*				
18				64.356*			
19					5.345*		
20						7.205*	
21							5.207*
22							1.880*
23							1.807
24							2.083
25							2.482*
26							
27							

Table 10 *Micro Model Non-Standardized Maximum Likelihood Estimates of Phi (ϕ) and Psy (ψ) Error Coefficients continued*

Variables	22	23	24	25	26	27
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22	9.511*					
23	3.722*	12.220*				
24	-.647	.671	6.6165*			
25	.892	.446	.983	11.303*		
26					1.770*	
27					-.309*	.932*

Note: 1 = participant male gender; 2 = parent's non-married marital status; 3 = non-Caucasian ethnic background; 4 = "poor" family income; 5 = mother's over-controlling parenting style; 6 = mother's indifferent parenting style; 7 = mother's abusive parenting style; 8 = father's over-controlling parenting style; 9 = father's indifferent parenting style; 10 = father's abusive parenting style; 11 = negative expressiveness within the family of origin; 12 = positive expressiveness within the family of origin; 13 = self-criticism; 14 = clarity of one's emotions; 15 = paying attention to one's emotions; 16 = the ability to repair negative emotions; 17 = the ability to discern other's emotions, 18 = negative meta-emotional responses to negative emotions; 19 = negative meta-emotional responses to positive emotions; 20 = meta-emotional view of emotions as human responses; 21 = interpersonal sensitivity; 22 = interpersonal ambivalence; 23 = interpersonal aggressiveness; 24 = need for social approval; 25 = lack of sociability; 26 = mental health problems; 27 = current "happy" mood; * = $p < 0.05$

Table 11 *Micro Model Standardized Solutions of Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients*

Variables	1	2	3	4	5	6	7
5	.041	.034	.180*	.062			
6	.134*	.121	.062	.136*			
7	.060	.079	.087	.172*			
8	-.032	-.000	.052	.179*			
9	.123*	.340*	-.002	.266*			
10	.088	.159*	-.024	.255*			
11	-.001	.059	.042	-.183*	.200*	-.098	.291*
12	-.210*	-.047	-.021	-.120*	-.112	-.202*	-.124
13	.102	.014	-.020	-.023			
14	.132*	.024	-.117*	.069			
15	-.181*	.136*	-.098	-.018			
16	.065	-.010	.064	-.026			
17	-.049	.112*	-.072	-.087			
18	-.132*	-.138*	-.014	.068			
19	.067	-.020	.291*	.074			
20	-.114	.068	.043	-.135			
21	-.137*	-.046	-.005	-.000			
22	-.033	.039	.045	-.067			
23	.003	-.034	.099	.014			
24	-.184*	-.041	.022	.004			
25	-.018	-.021	.071	.095			
26	-.074	-.012	.136*	.022			
27	-.066	.012	-.104	-.242*			

Table 11 *Micro Model Standardized Solutions of Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients continued*

Variables	8	9	10	11	12	13	14
5							
6							
7							
8							
9							
10							
11	.120	.188	.198[a]				
12	-.021	-.106	-.089				
13				.495*	-.105		
14						-.509*	
15				.122	.239*	-.140*	
16				-.069	.217*	-.432*	.151*
17				-.017	.002	-.058	.344*
18				.099	.035	.342*	-.253*
19				.032	.001	.169*	-.085
20				.122	.153*	.420*	.820*
21						.865*	-.024
22						.465*	.090
23						.378*	-.085
24						.966*	-.051
25						.618*	-.062
26						.506*	-.092
27						-.226*	.079

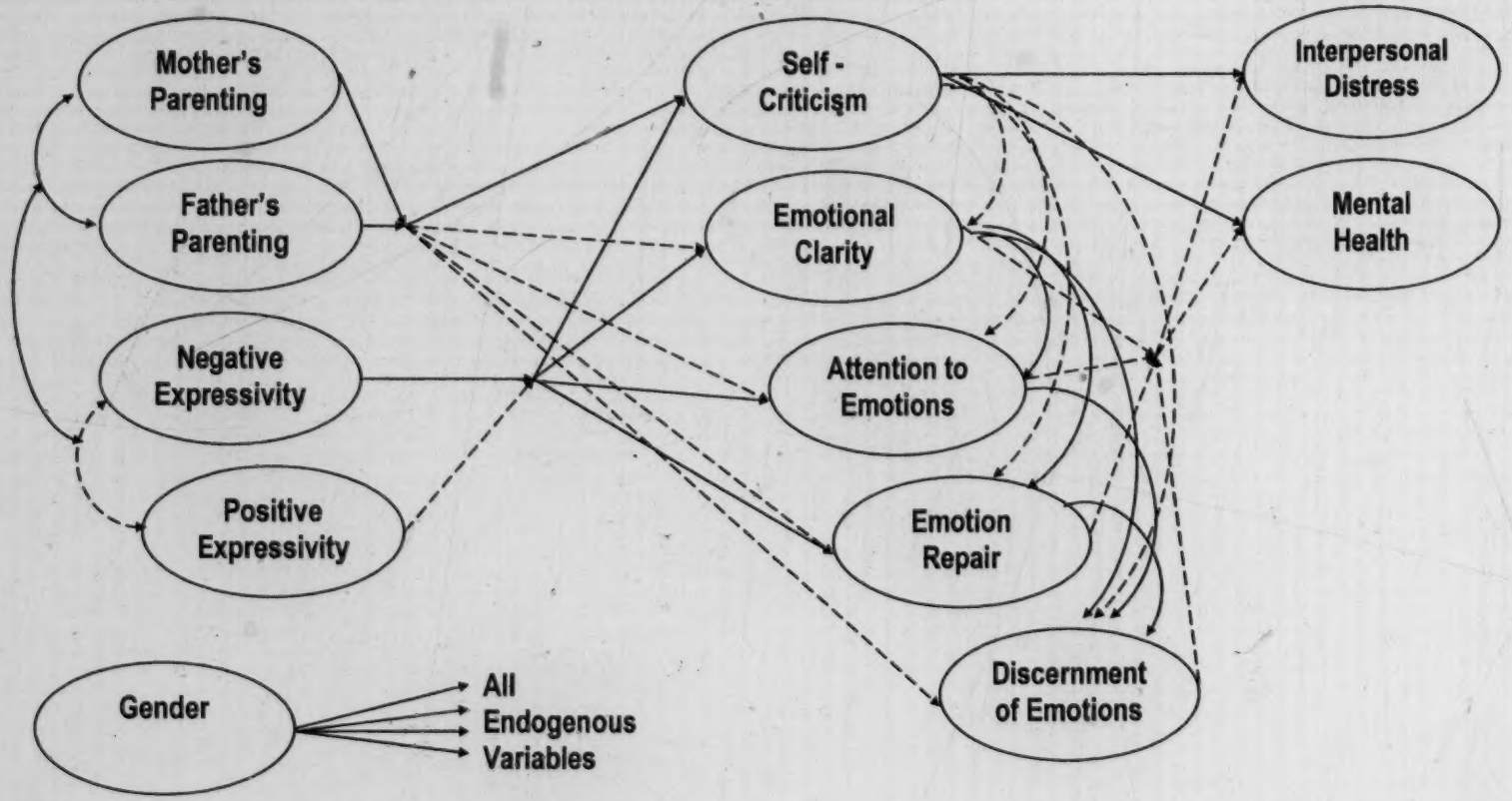
Table 11 *Micro Model Standardized Solutions of Maximum Likelihood Estimates of Beta (β) and Gamma (γ) Coefficients continued*

Variables	15	16	17	18	19	20	21
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15						.226*	
16							
17	.290*	.011					
18	-.118	.171*					
19	-.097	-.083					
20		-.179					
21	.153*	.147	-.068				
22	-.144*	-.092	-.094				
23	-.023	-.108	-.109				
24	.128	.354*	.008				
25	.023	.043	-.144*				
26	.089	-.188*	-.048				
27	-.125*	.258*	-.045				

Note: 1 = participant male gender; 2 = parent's non-married marital status; 3 = non-Caucasian ethnic background; 4 = "poor" family income; 5 = mother's over-controlling parenting style; 6 = mother's indifferent parenting style; 7 = mother's abusive parenting style; 8 = father's over-controlling parenting style; 9 = father's indifferent parenting style; 10 = father's abusive parenting style; 11 = negative expressiveness within the family of origin; 12 = positive expressiveness within the family of origin; 13 = self-criticism; 14 = clarity of one's emotions; 15 = paying attention to one's emotions; 16 = the ability to repair negative emotions; 17 = the ability to discern other's emotions, 18 = negative meta-emotional responses to negative emotions; 19 = negative meta-emotional responses to positive emotions; 20 = meta-emotional view of emotions as human responses; 21 = interpersonal sensitivity; 22 = interpersonal ambivalence; 23 = interpersonal aggressiveness; 24 = need for social approval; 25 = lack of sociability; 26 = mental health problems; 27 = current "happy" mood;

* = $p < 0.05$; [a] = $p < 0.10$

Figure 1 *Hypothesized Causal Effects Between Latent Variables of Macro Model*



Note: ——→ = positive effect, - - - - → = negative effect

Figure 2 *Hypothesized Causal Effects Between Latent Variables of Micro Model*

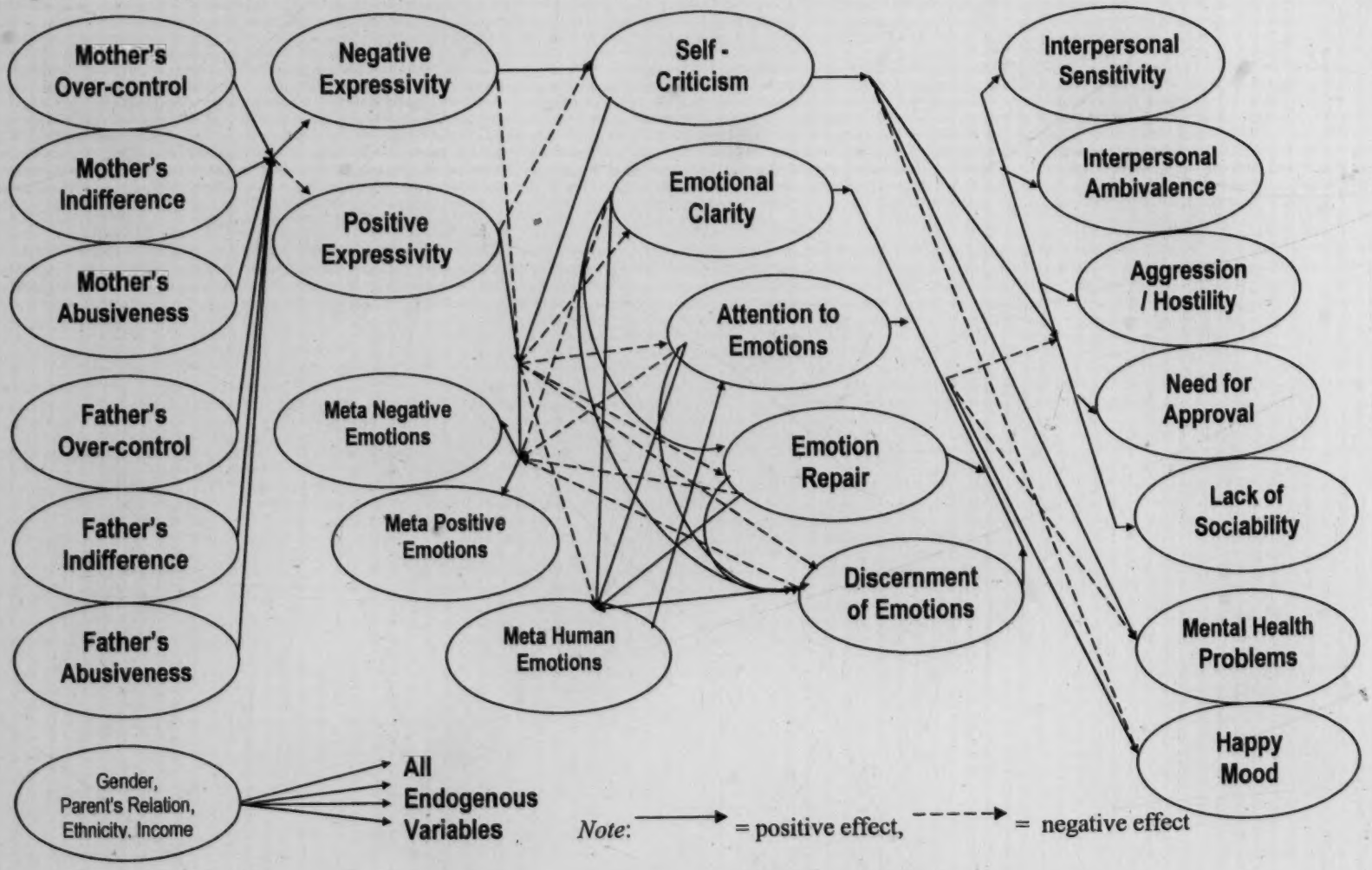
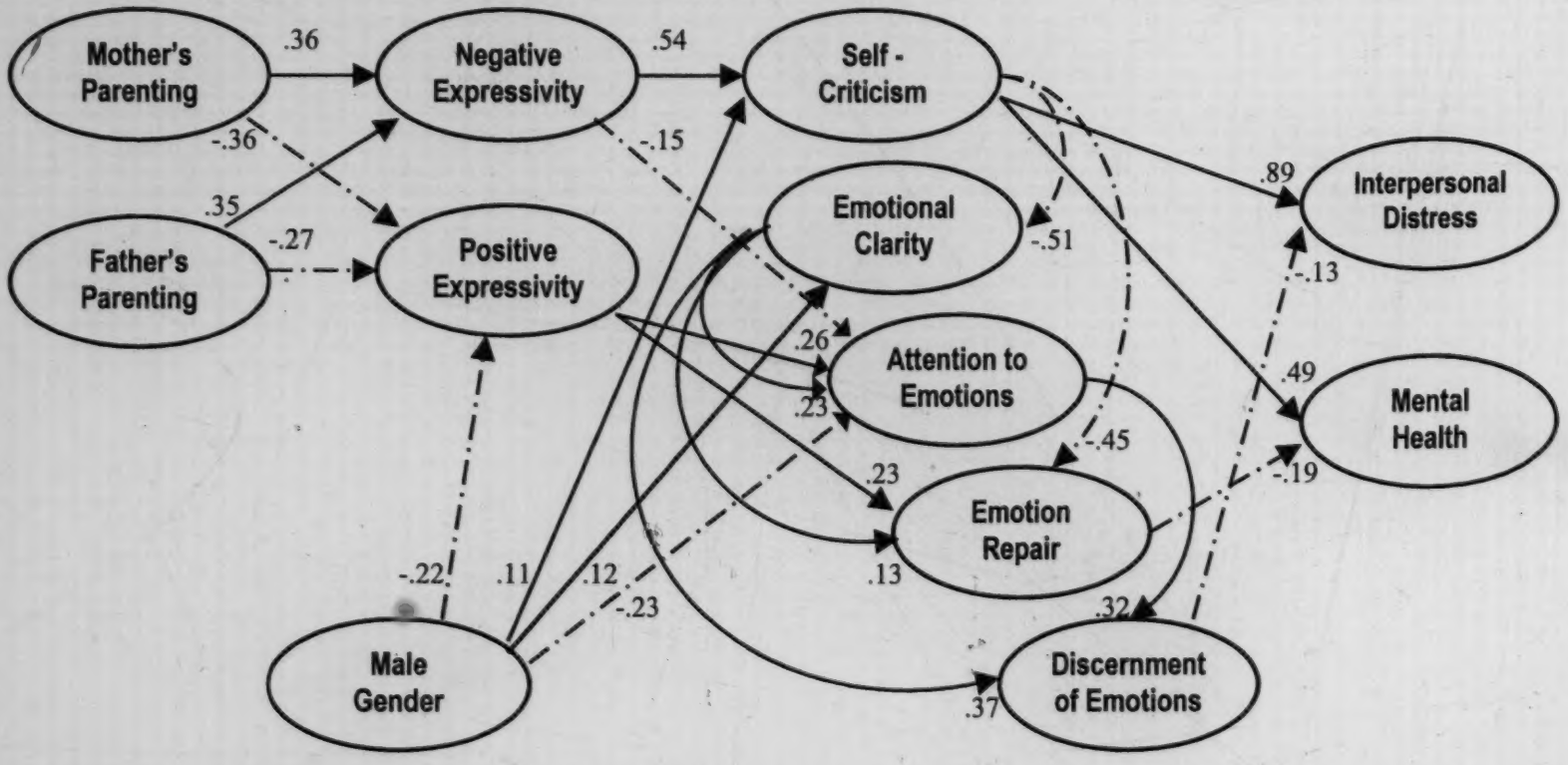


Figure 3 *Significant Standardized Effects Between Latent Variables of Macro Model*



Note: ——→ = positive effect, - - - - → = negative effect

Figure 4 *Significant Standardized Effects of Latent Exogenous Variables of Micro Model*

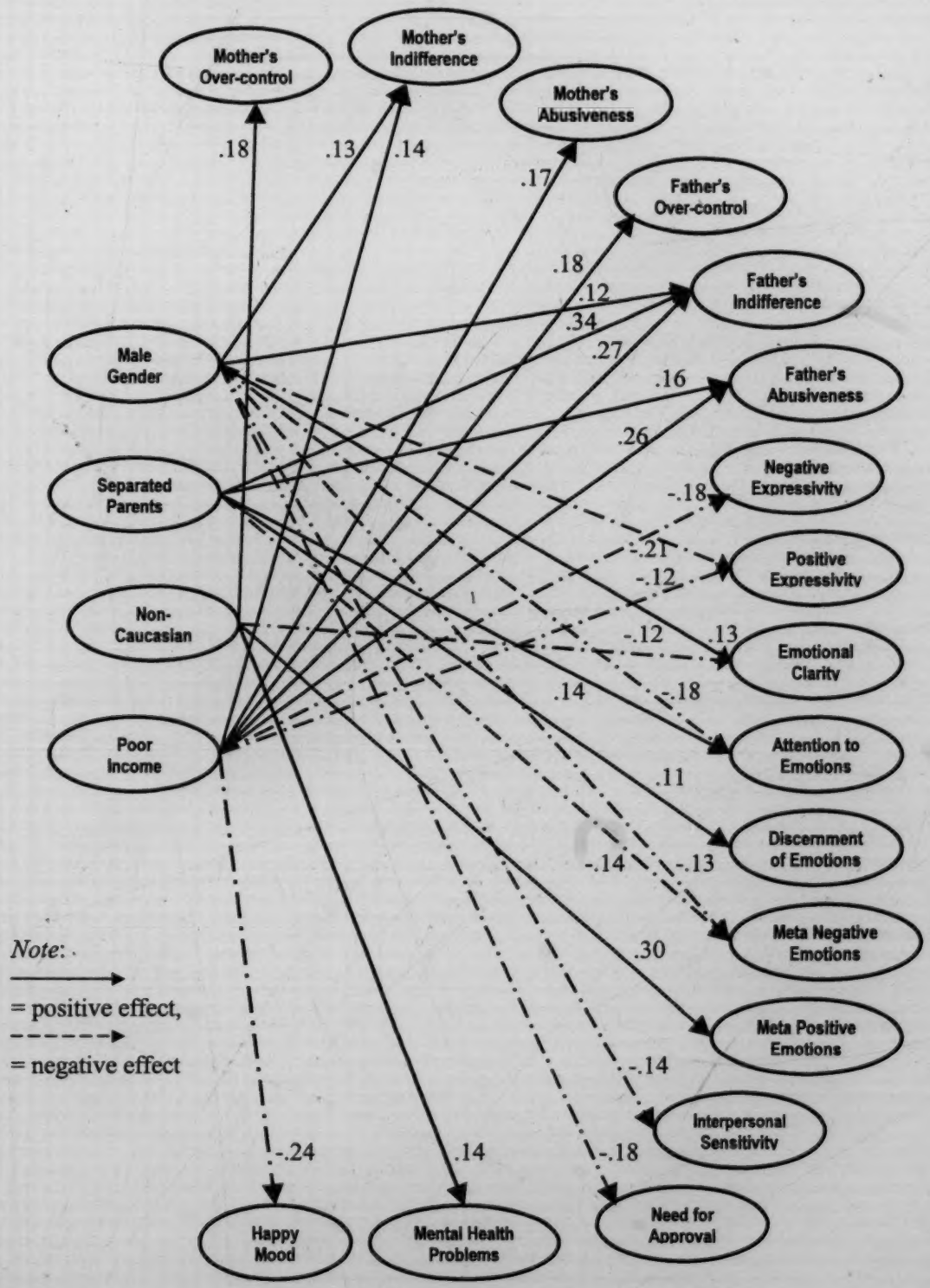
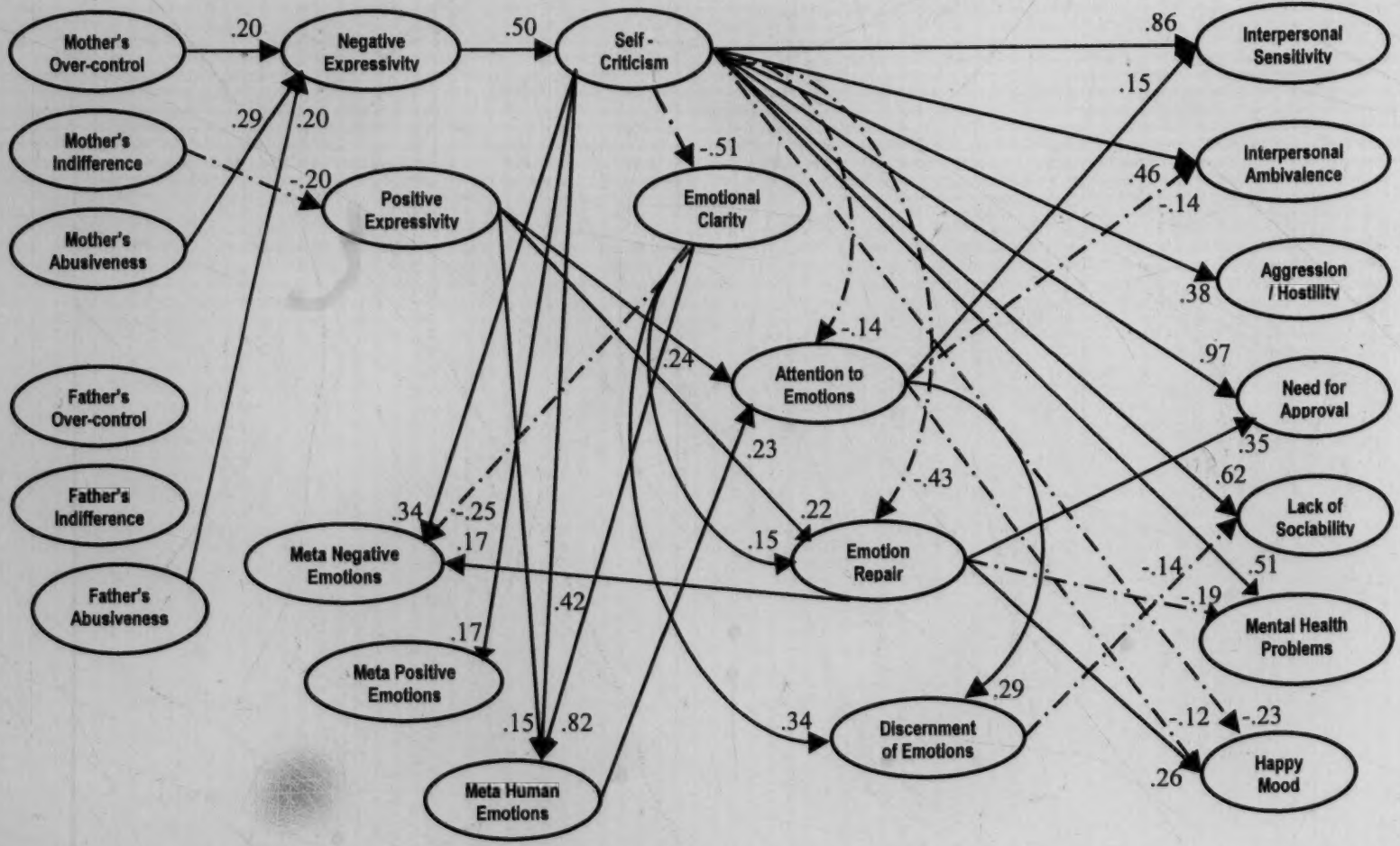


Figure 5 *Significant Standardized Effects Between Latent Endogenous Variables of Micro Model*



Note: ——→ = positive effect, - - - - → = negative effect